

# ARM SystemAnalyzer API

## 1.0

Generated by Doxygen 1.8.5

Tue Nov 8 2016 09:46:02



# Contents

<b>1</b>	<b>Namespace Index</b>	<b>1</b>
1.1	Packages	1
<b>2</b>	<b>Hierarchical Index</b>	<b>3</b>
2.1	Class Hierarchy	3
<b>3</b>	<b>Class Index</b>	<b>5</b>
3.1	Class List	5
<b>4</b>	<b>File Index</b>	<b>7</b>
4.1	File List	7
<b>5</b>	<b>Namespace Documentation</b>	<b>9</b>
5.1	Package CarbonAnalyzerAPI	9
5.2	Package CarbonAnalyzerAPI.Interfaces	9
5.2.1	Detailed Description	11
5.2.2	Enumeration Type Documentation	11
5.2.2.1	ChannelTypes	11
5.2.2.2	TraceType	12
5.2.2.3	TransactionStreamTypes	12
<b>6</b>	<b>Class Documentation</b>	<b>13</b>
6.1	CarbonAnalyzerAPI.CycleRange Class Reference	13
6.1.1	Detailed Description	13
6.1.2	Constructor & Destructor Documentation	14
6.1.2.1	CycleRange	14
6.1.2.2	CycleRange	14
6.1.3	Member Function Documentation	14
6.1.3.1	FromBeginning	14
6.1.3.2	FromTo	14
6.1.3.3	SQL	14
6.1.3.4	ToEnding	14
6.1.4	Property Documentation	14

6.1.4.1	All	14
6.1.4.2	End	14
6.1.4.3	FullRange	14
6.1.4.4	SpecifiedToEnd	14
6.1.4.5	SpecifiedRange	14
6.1.4.6	Start	14
6.1.4.7	StartToRange	14
6.2	CarbonAnalyzerAPI.Interfaces.IAnalyzer Interface Reference	14
6.2.1	Detailed Description	15
6.2.2	Member Function Documentation	15
6.2.2.1	CreateDatabase	15
6.2.2.2	Open	15
6.2.3	Property Documentation	15
6.2.3.1	Components	15
6.2.3.2	FunctionStreams	16
6.2.3.3	MetaData	16
6.2.3.4	ProfileStreams	16
6.2.3.5	TransactionStreams	16
6.3	CarbonAnalyzerAPI.Interfaces.IAXI4ACETransaction Interface Reference	16
6.3.1	Detailed Description	17
6.3.2	Property Documentation	17
6.3.2.1	Address	17
6.3.2.2	AddressComplete	18
6.3.2.3	AddressStart	18
6.3.2.4	AxBurst	18
6.3.2.5	AxLock	18
6.3.2.6	AxSize	18
6.3.2.7	ByteEnableLength	18
6.3.2.8	Cache	18
6.3.2.9	Command	18
6.3.2.10	DataBeats	18
6.3.2.11	DataLength	18
6.3.2.12	DataWidth	18
6.3.2.13	ID	18
6.3.2.14	InterConnectID	19
6.3.2.15	Length	19
6.3.2.16	Protection	19
6.3.2.17	QOS	19
6.3.2.18	Region	19
6.3.2.19	Response	19

6.3.2.20	<a href="#">ResponseComplete</a>	19
6.3.2.21	<a href="#">ResponseStart</a>	19
6.3.2.22	<a href="#">StreamingWidth</a>	19
6.3.2.23	<a href="#">TID</a>	19
6.3.2.24	<a href="#">TransactionConnectionID</a>	19
6.3.2.25	<a href="#">TransactionLatency</a>	19
6.3.2.26	<a href="#">TransactionsBeats</a>	20
6.3.2.27	<a href="#">TransactionType</a>	20
6.3.2.28	<a href="#">UserAddress</a>	20
6.3.2.29	<a href="#">UserBitWidth</a>	20
6.3.2.30	<a href="#">UserResponse</a>	20
6.3.2.31	<a href="#">XactionID</a>	20
6.4	<a href="#">CarbonAnalyzerAPI.Interfaces.IAXI4ACETransactionBeat Interface Reference</a>	20
6.4.1	<a href="#">Detailed Description</a>	21
6.4.2	<a href="#">Property Documentation</a>	21
6.4.2.1	<a href="#">BeatComplete</a>	21
6.4.2.2	<a href="#">BeatStart</a>	21
6.4.2.3	<a href="#">DataBeat</a>	21
6.4.2.4	<a href="#">DataHigh</a>	21
6.4.2.5	<a href="#">DataLow</a>	21
6.4.2.6	<a href="#">ID</a>	21
6.4.2.7	<a href="#">StrobeHigh</a>	21
6.4.2.8	<a href="#">StrobeLow</a>	21
6.4.2.9	<a href="#">TransactionID</a>	21
6.4.2.10	<a href="#">UserData</a>	22
6.5	<a href="#">CarbonAnalyzerAPI.Interfaces.IAXI4ACETransactionBeats Interface Reference</a>	22
6.5.1	<a href="#">Detailed Description</a>	22
6.5.2	<a href="#">Member Function Documentation</a>	22
6.5.2.1	<a href="#">Add</a>	22
6.5.2.2	<a href="#">Items</a>	22
6.5.2.3	<a href="#">Items</a>	23
6.6	<a href="#">CarbonAnalyzerAPI.Interfaces.IAXI4ACETransactions Interface Reference</a>	23
6.6.1	<a href="#">Detailed Description</a>	23
6.6.2	<a href="#">Member Function Documentation</a>	23
6.6.2.1	<a href="#">Add</a>	23
6.6.2.2	<a href="#">Items</a>	24
6.7	<a href="#">CarbonAnalyzerAPI.Interfaces.IAXI4Transaction Interface Reference</a>	24
6.7.1	<a href="#">Detailed Description</a>	26
6.7.2	<a href="#">Property Documentation</a>	26
6.7.2.1	<a href="#">Address</a>	26

6.7.2.2	AddressComplete	26
6.7.2.3	AddressStart	26
6.7.2.4	AxBurst	26
6.7.2.5	AxLock	26
6.7.2.6	AxSize	26
6.7.2.7	ByteEnableLength	26
6.7.2.8	Cache	27
6.7.2.9	Command	27
6.7.2.10	DataBeats	27
6.7.2.11	DataLength	27
6.7.2.12	DataWidth	27
6.7.2.13	ID	27
6.7.2.14	InterConnectID	27
6.7.2.15	Length	27
6.7.2.16	Protection	27
6.7.2.17	QOS	27
6.7.2.18	Region	27
6.7.2.19	Response	27
6.7.2.20	ResponseComplete	28
6.7.2.21	ResponseStart	28
6.7.2.22	StreamingWidth	28
6.7.2.23	TID	28
6.7.2.24	TransactionConnectionID	28
6.7.2.25	TransactionLatency	28
6.7.2.26	TransactionsBeats	28
6.7.2.27	UserAddress	28
6.7.2.28	UserBitWidth	28
6.7.2.29	UserResponse	28
6.7.2.30	XactionID	28
6.8	CarbonAnalyzerAPI.Interfaces.IAXI4TransactionBeat Interface Reference	29
6.8.1	Detailed Description	29
6.8.2	Property Documentation	29
6.8.2.1	BeatComplete	29
6.8.2.2	BeatStart	29
6.8.2.3	DataBeat	29
6.8.2.4	DataHigh	29
6.8.2.5	DataLow	30
6.8.2.6	ID	30
6.8.2.7	StrobeHigh	30
6.8.2.8	StrobeLow	30

6.8.2.9	TransactionID	30
6.8.2.10	UserData	30
6.9	CarbonAnalyzerAPI.Interfaces.IAXI4TransactionBeats Interface Reference	30
6.9.1	Detailed Description	30
6.9.2	Member Function Documentation	30
6.9.2.1	Add	30
6.9.2.2	Items	31
6.9.2.3	Items	31
6.10	CarbonAnalyzerAPI.Interfaces.IAXI4Transactions Interface Reference	31
6.10.1	Detailed Description	31
6.10.2	Member Function Documentation	32
6.10.2.1	Add	32
6.10.2.2	Items	33
6.11	CarbonAnalyzerAPI.Interfaces.IAXIv2Transaction Interface Reference	33
6.11.1	Detailed Description	35
6.11.2	Property Documentation	35
6.11.2.1	Address	35
6.11.2.2	AddressComplete	35
6.11.2.3	AddressStart	35
6.11.2.4	AxBurst	35
6.11.2.5	AxLen	35
6.11.2.6	AxLock	35
6.11.2.7	AxSize	35
6.11.2.8	ByteEnableLength	35
6.11.2.9	Cache	35
6.11.2.10	Command	35
6.11.2.11	DataBeats	36
6.11.2.12	DataLength	36
6.11.2.13	DataWidth	36
6.11.2.14	ID	36
6.11.2.15	InterConnectID	36
6.11.2.16	Protection	36
6.11.2.17	Response	36
6.11.2.18	ResponseComplete	36
6.11.2.19	ResponseStart	36
6.11.2.20	StreamingWidth	36
6.11.2.21	TID	36
6.11.2.22	TransactionConnectionID	36
6.11.2.23	TransactionsBeats	37
6.11.2.24	XactionID	37

6.12 CarbonAnalyzerAPI.Interfaces.IAXIv2TransactionBeat Interface Reference	37
6.12.1 Detailed Description	37
6.12.2 Property Documentation	37
6.12.2.1 BeatComplete	37
6.12.2.2 BeatStart	37
6.12.2.3 DataBeat	38
6.12.2.4 DataHigh	38
6.12.2.5 DataLow	38
6.12.2.6 ID	38
6.12.2.7 StrobeHigh	38
6.12.2.8 StrobeLow	38
6.12.2.9 TransactionID	38
6.13 CarbonAnalyzerAPI.Interfaces.IAXIv2TransactionBeats Interface Reference	38
6.13.1 Detailed Description	38
6.13.2 Member Function Documentation	39
6.13.2.1 Add	39
6.13.2.2 Items	39
6.13.2.3 Items	39
6.14 CarbonAnalyzerAPI.Interfaces.IAXIv2Transactions Interface Reference	39
6.14.1 Detailed Description	39
6.14.2 Member Function Documentation	40
6.14.2.1 Add	40
6.14.2.2 Items	40
6.15 CarbonAnalyzerAPI.Interfaces.ICache Interface Reference	41
6.15.1 Detailed Description	41
6.15.2 Property Documentation	41
6.15.2.1 Bufferable	41
6.15.2.2 Cacheable	41
6.15.2.3 ReadAlloc	41
6.15.2.4 WriteAlloc	41
6.16 CarbonAnalyzerAPI.Interfaces.ICapiDataCorrelatedValue Interface Reference	41
6.16.1 Detailed Description	42
6.16.2 Property Documentation	42
6.16.2.1 CycleNumber	42
6.16.2.2 Value1	42
6.16.2.3 Value2	42
6.17 CarbonAnalyzerAPI.Interfaces.ICapiDataCorrelatedValues Interface Reference	42
6.17.1 Detailed Description	42
6.17.2 Member Function Documentation	42
6.17.2.1 Values	42



6.18 CarbonAnalyzerAPI.Interfaces.ICapiDataNumericValue Interface Reference . . . . .	43
6.18.1 Detailed Description . . . . .	43
6.18.2 Property Documentation . . . . .	43
6.18.2.1 CycleNumber . . . . .	43
6.18.2.2 Value . . . . .	43
6.19 CarbonAnalyzerAPI.Interfaces.ICapiDataNumericValues Interface Reference . . . . .	43
6.19.1 Detailed Description . . . . .	44
6.19.2 Member Function Documentation . . . . .	44
6.19.2.1 Values . . . . .	44
6.20 CarbonAnalyzerAPI.Interfaces.ICapiDataSymbolValue Interface Reference . . . . .	44
6.20.1 Detailed Description . . . . .	44
6.20.2 Property Documentation . . . . .	44
6.20.2.1 Count . . . . .	44
6.20.2.2 CycleNumber . . . . .	44
6.20.2.3 Value . . . . .	45
6.21 CarbonAnalyzerAPI.Interfaces.ICapiDataSymbolValues Interface Reference . . . . .	45
6.21.1 Detailed Description . . . . .	45
6.21.2 Member Function Documentation . . . . .	45
6.21.2.1 Values . . . . .	45
6.22 CarbonAnalyzerAPI.Interfaces.ICapiStream Interface Reference . . . . .	45
6.22.1 Detailed Description . . . . .	46
6.22.2 Member Function Documentation . . . . .	46
6.22.2.1 AddChannel . . . . .	46
6.22.2.2 CorrelatedValues . . . . .	46
6.22.3 Property Documentation . . . . .	46
6.22.3.1 Channels . . . . .	46
6.22.3.2 Description . . . . .	47
6.22.3.3 ID . . . . .	47
6.22.3.4 Label . . . . .	47
6.22.3.5 Name . . . . .	47
6.22.3.6 SimulationWindows . . . . .	47
6.22.3.7 SourceInstance . . . . .	47
6.22.3.8 TotalWindowCycles . . . . .	47
6.23 CarbonAnalyzerAPI.Interfaces.ICapiStreamChannel Interface Reference . . . . .	47
6.23.1 Detailed Description . . . . .	48
6.23.2 Member Function Documentation . . . . .	48
6.23.2.1 AddSymbol . . . . .	48
6.23.2.2 AddValue . . . . .	48
6.23.2.3 FlushValues . . . . .	49
6.23.3 Property Documentation . . . . .	49

6.23.3.1	<a href="#">DataType</a>	49
6.23.3.2	<a href="#">Description</a>	49
6.23.3.3	<a href="#">Events</a>	49
6.23.3.4	<a href="#">ID</a>	49
6.23.3.5	<a href="#">MaxEventCycle</a>	49
6.23.3.6	<a href="#">MinEventCycle</a>	49
6.23.3.7	<a href="#">Name</a>	49
6.23.3.8	<a href="#">NumericValues</a>	49
6.23.3.9	<a href="#">Symbols</a>	50
6.23.3.10	<a href="#">SymbolValues</a>	50
6.23.3.11	<a href="#">Type</a>	50
6.24	<a href="#">CarbonAnalyzerAPI.Interfaces.ICapiStreamChannels Interface Reference</a>	50
6.24.1	<a href="#">Detailed Description</a>	50
6.24.2	<a href="#">Property Documentation</a>	50
6.24.2.1	<a href="#">Length</a>	50
6.24.2.2	<a href="#">this[int index]</a>	50
6.24.2.3	<a href="#">this[string index]</a>	51
6.25	<a href="#">CarbonAnalyzerAPI.Interfaces.ICapiStreamChannelSymbol Interface Reference</a>	52
6.25.1	<a href="#">Detailed Description</a>	52
6.25.2	<a href="#">Member Function Documentation</a>	52
6.25.2.1	<a href="#">MaxEventCycle</a>	52
6.25.2.2	<a href="#">MinEventCycle</a>	53
6.25.3	<a href="#">Property Documentation</a>	53
6.25.3.1	<a href="#">CapiStreamChannelID</a>	53
6.25.3.2	<a href="#">ID</a>	53
6.25.3.3	<a href="#">Name</a>	53
6.25.3.4	<a href="#">Value</a>	53
6.26	<a href="#">CarbonAnalyzerAPI.Interfaces.ICapiStreamChannelSymbols Interface Reference</a>	53
6.26.1	<a href="#">Detailed Description</a>	53
6.26.2	<a href="#">Property Documentation</a>	53
6.26.2.1	<a href="#">Length</a>	53
6.27	<a href="#">CarbonAnalyzerAPI.Interfaces.ICapiStreams Interface Reference</a>	54
6.27.1	<a href="#">Detailed Description</a>	54
6.27.2	<a href="#">Member Function Documentation</a>	54
6.27.2.1	<a href="#">Add</a>	54
6.27.3	<a href="#">Property Documentation</a>	54
6.27.3.1	<a href="#">Length</a>	54
6.27.3.2	<a href="#">this[int index]</a>	54
6.27.3.3	<a href="#">this[string index]</a>	55
6.28	<a href="#">CarbonAnalyzerAPI.Interfaces.ICHITransaction Interface Reference</a>	55

6.28.1 Detailed Description . . . . .	55
6.28.2 Property Documentation . . . . .	55
6.28.2.1 ID . . . . .	55
6.28.2.2 TransactionConnectionID . . . . .	55
6.28.2.3 TransactionID . . . . .	56
6.28.2.4 TransactionsFlits . . . . .	56
6.29 CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit Interface Reference . . . . .	56
6.29.1 Detailed Description . . . . .	60
6.29.2 Member Function Documentation . . . . .	60
6.29.2.1 GetAddr . . . . .	60
6.29.2.2 GetBE . . . . .	60
6.29.2.3 GetCCID . . . . .	61
6.29.2.4 GetChannel . . . . .	62
6.29.2.5 GetCycle . . . . .	62
6.29.2.6 GetData . . . . .	62
6.29.2.7 GetData10 . . . . .	62
6.29.2.8 GetData12 . . . . .	63
6.29.2.9 GetData14 . . . . .	64
6.29.2.10 GetData2 . . . . .	64
6.29.2.11 GetData4 . . . . .	64
6.29.2.12 GetData6 . . . . .	64
6.29.2.13 GetData8 . . . . .	64
6.29.2.14 GetDataID . . . . .	65
6.29.2.15 GetDBID . . . . .	65
6.29.2.16 GetDynPCrd . . . . .	65
6.29.2.17 GetExcl . . . . .	65
6.29.2.18 GetExpCompAck . . . . .	66
6.29.2.19 GetID . . . . .	67
6.29.2.20 GetLikelyShared . . . . .	67
6.29.2.21 GetLPID . . . . .	67
6.29.2.22 GetMemAttr . . . . .	67
6.29.2.23 GetNS . . . . .	68
6.29.2.24 GetOpcode . . . . .	69
6.29.2.25 GetOpcode . . . . .	69
6.29.2.26 GetOpcode . . . . .	69
6.29.2.27 GetOpcode . . . . .	69
6.29.2.28 GetOpcode . . . . .	70
6.29.2.29 GetOpcode . . . . .	70
6.29.2.30 GetOpcode . . . . .	70
6.29.2.31 GetOpcode . . . . .	70

6.29.2.32 GetOrder . . . . .	71
6.29.2.33 GetPCrdType . . . . .	71
6.29.2.34 GetQoS . . . . .	71
6.29.2.35 GetRawOpCode . . . . .	71
6.29.2.36 GetRawResponse . . . . .	72
6.29.2.37 GetRawResponseError . . . . .	73
6.29.2.38 GetRawSize . . . . .	73
6.29.2.39 GetREQOpcodeType . . . . .	73
6.29.2.40 GetResp . . . . .	73
6.29.2.41 GetResp . . . . .	74
6.29.2.42 GetRespErr . . . . .	74
6.29.2.43 GetRespErr . . . . .	74
6.29.2.44 GetRSVDC . . . . .	74
6.29.2.45 GetSize . . . . .	75
6.29.2.46 GetSize . . . . .	75
6.29.2.47 GetSnpAttr . . . . .	75
6.29.2.48 GetSrcID . . . . .	75
6.29.2.49 GetTgtID . . . . .	76
6.29.2.50 GetTransactionID . . . . .	76
6.29.2.51 GetTxnID . . . . .	76
6.29.2.52 SetAddr . . . . .	76
6.29.2.53 SetBE . . . . .	77
6.29.2.54 SetCCID . . . . .	77
6.29.2.55 SetChannel . . . . .	77
6.29.2.56 SetCycle . . . . .	77
6.29.2.57 SetData . . . . .	78
6.29.2.58 SetData10 . . . . .	79
6.29.2.59 SetData12 . . . . .	79
6.29.2.60 SetData14 . . . . .	79
6.29.2.61 SetData2 . . . . .	79
6.29.2.62 SetData4 . . . . .	79
6.29.2.63 SetData6 . . . . .	80
6.29.2.64 SetData8 . . . . .	80
6.29.2.65 SetDataID . . . . .	80
6.29.2.66 SetDBID . . . . .	80
6.29.2.67 SetDynPCrd . . . . .	81
6.29.2.68 SetExcl . . . . .	82
6.29.2.69 SetExpCompAck . . . . .	82
6.29.2.70 SetLikelyShared . . . . .	82
6.29.2.71 SetLPID . . . . .	82

6.29.2.72 SetMemAttr . . . . .	83
6.29.2.73 SetNS . . . . .	84
6.29.2.74 SetOpcode . . . . .	84
6.29.2.75 SetOpcode . . . . .	84
6.29.2.76 SetOpcode . . . . .	84
6.29.2.77 SetOpcode . . . . .	85
6.29.2.78 SetOpcode . . . . .	85
6.29.2.79 SetOpcode . . . . .	85
6.29.2.80 SetOpcode . . . . .	85
6.29.2.81 SetOpcode . . . . .	86
6.29.2.82 SetOrder . . . . .	86
6.29.2.83 SetPCrdType . . . . .	86
6.29.2.84 SetQoS . . . . .	86
6.29.2.85 SetREQOpcodeType . . . . .	87
6.29.2.86 SetResp . . . . .	87
6.29.2.87 SetResp . . . . .	87
6.29.2.88 SetRespErr . . . . .	87
6.29.2.89 SetRespErr . . . . .	88
6.29.2.90 SetRSVDC . . . . .	88
6.29.2.91 SetSize . . . . .	88
6.29.2.92 SetSize . . . . .	88
6.29.2.93 SetSnpAttr . . . . .	89
6.29.2.94 SetSrcID . . . . .	90
6.29.2.95 SetTgtID . . . . .	90
6.29.2.96 SetTxnID . . . . .	90
6.29.3 Property Documentation . . . . .	90
6.29.3.1 Channel . . . . .	90
6.29.3.2 Cycle . . . . .	90
6.29.3.3 FlitID . . . . .	91
6.29.3.4 ID . . . . .	91
6.29.3.5 TransactionID . . . . .	91
6.29.3.6 UserField . . . . .	91
6.30 CarbonAnalyzerAPI.Interfaces.ICHITransactionFlits Interface Reference . . . . .	91
6.30.1 Detailed Description . . . . .	92
6.30.2 Member Function Documentation . . . . .	92
6.30.2.1 AddRXDAT . . . . .	92
6.30.2.2 AddRXREQ . . . . .	92
6.30.2.3 AddRXRSP . . . . .	92
6.30.2.4 AddRXSNP . . . . .	92
6.30.2.5 AddTXDAT . . . . .	93

6.30.2.6	AddTXREQ	93
6.30.2.7	AddTXRSP	93
6.30.2.8	AddTXSNP	93
6.30.2.9	DataItems	93
6.30.2.10	FirstDATFlitCycle	93
6.30.2.11	Items	93
6.30.2.12	Items	93
6.30.2.13	Items	94
6.30.2.14	LastDATFlitCycle	95
6.30.2.15	MaxFlitCycle	95
6.30.2.16	MinFlitCycle	95
6.30.2.17	ReqItems	95
6.31	CarbonAnalyzerAPI.Interfaces.ICHITransactions Interface Reference	95
6.31.1	Detailed Description	96
6.31.2	Member Function Documentation	96
6.31.2.1	Add	96
6.31.2.2	FindByTransactionID	96
6.31.2.3	FlitsOnChannelCount	96
6.31.2.4	Items	97
6.31.2.5	UniqueTransactionsCount	98
6.32	CarbonAnalyzerAPI.Interfaces.IComponent Interface Reference	98
6.32.1	Detailed Description	98
6.32.2	Member Function Documentation	99
6.32.2.1	AddParameter	99
6.32.3	Property Documentation	100
6.32.3.1	ComponentParameters	100
6.32.3.2	FullName	100
6.32.3.3	ID	100
6.32.3.4	Model	100
6.32.3.5	Name	100
6.32.3.6	Type	100
6.33	CarbonAnalyzerAPI.Interfaces.IComponentParameter Interface Reference	100
6.33.1	Detailed Description	101
6.33.2	Property Documentation	101
6.33.2.1	ID	101
6.33.2.2	Name	101
6.33.2.3	Private	101
6.33.2.4	ReadOnly	101
6.33.2.5	RunTime	101
6.33.2.6	Value	101

6.34 CarbonAnalyzerAPI.Interfaces.IComponentParameters Interface Reference . . . . .	101
6.34.1 Detailed Description . . . . .	102
6.34.2 Property Documentation . . . . .	102
6.34.2.1 Length . . . . .	102
6.34.2.2 this[int index] . . . . .	102
6.34.2.3 this[string index] . . . . .	102
6.35 CarbonAnalyzerAPI.Interfaces.IComponents Interface Reference . . . . .	102
6.35.1 Detailed Description . . . . .	103
6.35.2 Member Function Documentation . . . . .	103
6.35.2.1 Add . . . . .	103
6.35.3 Property Documentation . . . . .	103
6.35.3.1 Length . . . . .	103
6.35.3.2 this[int index] . . . . .	103
6.35.3.3 this[string index] . . . . .	104
6.36 CarbonAnalyzerAPI.Interfaces.IDataSet Interface Reference . . . . .	105
6.36.1 Detailed Description . . . . .	105
6.36.2 Property Documentation . . . . .	105
6.36.2.1 Name . . . . .	105
6.37 CarbonAnalyzerAPI.Interfaces.IFunctionStream Interface Reference . . . . .	105
6.37.1 Detailed Description . . . . .	106
6.37.2 Property Documentation . . . . .	106
6.37.2.1 DesignName . . . . .	106
6.37.2.2 Events . . . . .	106
6.37.2.3 Name . . . . .	106
6.37.2.4 SimulationWindows . . . . .	106
6.37.2.5 SourceName . . . . .	106
6.37.2.6 StreamName . . . . .	106
6.37.2.7 TotalWindowCycles . . . . .	106
6.37.2.8 Traces . . . . .	106
6.38 CarbonAnalyzerAPI.Interfaces.IFunctionStreams Interface Reference . . . . .	107
6.38.1 Detailed Description . . . . .	107
6.38.2 Member Function Documentation . . . . .	107
6.38.2.1 Add . . . . .	107
6.38.3 Property Documentation . . . . .	107
6.38.3.1 Length . . . . .	107
6.38.3.2 this[int index] . . . . .	107
6.38.3.3 this[string index] . . . . .	108
6.39 CarbonAnalyzerAPI.Interfaces.IFunctionTrace Interface Reference . . . . .	108
6.39.1 Detailed Description . . . . .	108
6.39.2 Property Documentation . . . . .	108

6.39.2.1	Cycle	108
6.39.2.2	FunctionName	108
6.39.2.3	PC	109
6.39.2.4	Type	109
6.40	CarbonAnalyzerAPI.Interfaces.IFunctionTraces Interface Reference	109
6.40.1	Detailed Description	109
6.40.2	Member Function Documentation	109
6.40.2.1	Add	109
6.40.2.2	Values	109
6.41	CarbonAnalyzerAPI.Interfaces.IMetaData Interface Reference	110
6.41.1	Detailed Description	110
6.41.2	Property Documentation	110
6.41.2.1	CreatedOn	110
6.41.2.2	DesignName	110
6.41.2.3	ID	110
6.41.2.4	SimulationCycles	110
6.41.2.5	Version	111
6.42	CarbonAnalyzerAPI.Interfaces.INamedObject Interface Reference	111
6.42.1	Property Documentation	111
6.42.1.1	Name	111
6.43	CarbonAnalyzerAPI.Interfaces.IProtection Interface Reference	111
6.43.1	Detailed Description	111
6.43.2	Property Documentation	111
6.43.2.1	Ins	111
6.43.2.2	Priv	111
6.43.2.3	Secure	112
6.44	CarbonAnalyzerAPI.Interfaces.ISimulationWindow Interface Reference	112
6.44.1	Detailed Description	112
6.44.2	Property Documentation	112
6.44.2.1	EndCycle	112
6.44.2.2	ID	112
6.44.2.3	StartCycle	112
6.45	CarbonAnalyzerAPI.Interfaces.ISimulationWindows Interface Reference	113
6.45.1	Detailed Description	113
6.45.2	Property Documentation	113
6.45.2.1	Length	113
6.45.2.2	this[int index]	113
6.46	CarbonAnalyzerAPI.Interfaces.ITransactionStream Interface Reference	113
6.46.1	Detailed Description	114
6.46.2	Property Documentation	114



6.46.2.1	<a href="#">AXI4ACETransactions</a>	114
6.46.2.2	<a href="#">AXI4Transactions</a>	114
6.46.2.3	<a href="#">AXIv2Transactions</a>	114
6.46.2.4	<a href="#">BusBitWidth</a>	114
6.46.2.5	<a href="#">CHITransactions</a>	114
6.46.2.6	<a href="#">DesignName</a>	114
6.46.2.7	<a href="#">Events</a>	115
6.46.2.8	<a href="#">Name</a>	115
6.46.2.9	<a href="#">SimulationWindows</a>	115
6.46.2.10	<a href="#">SourceName</a>	115
6.46.2.11	<a href="#">StreamName</a>	115
6.46.2.12	<a href="#">SubType</a>	115
6.46.2.13	<a href="#">TotalWindowCycles</a>	115
6.47	<a href="#">CarbonAnalyzerAPI.Interfaces.ITransactionStreams Interface Reference</a>	115
6.47.1	<a href="#">Detailed Description</a>	116
6.47.2	<a href="#">Member Function Documentation</a>	116
6.47.2.1	<a href="#">Add</a>	116
6.47.2.2	<a href="#">Add</a>	116
6.47.3	<a href="#">Property Documentation</a>	116
6.47.3.1	<a href="#">Length</a>	116
6.47.3.2	<a href="#">this[int index]</a>	116
6.47.3.3	<a href="#">this[string index]</a>	116
<b>7</b>	<b><a href="#">File Documentation</a></b>	<b>117</b>
7.1	<a href="#">CycleRange.cs File Reference</a>	117
7.2	<a href="#">IAnalyzer.cs File Reference</a>	117
7.3	<a href="#">IAXI4ACETransaction.cs File Reference</a>	117
7.4	<a href="#">IAXI4ACETransactionBeat.cs File Reference</a>	118
7.5	<a href="#">IAXI4ACETransactionBeats.cs File Reference</a>	118
7.6	<a href="#">IAXI4ACETransactions.cs File Reference</a>	118
7.7	<a href="#">IAXI4Transaction.cs File Reference</a>	118
7.8	<a href="#">IAXI4TransactionBeat.cs File Reference</a>	119
7.9	<a href="#">IAXI4TransactionBeats.cs File Reference</a>	119
7.10	<a href="#">IAXI4Transactions.cs File Reference</a>	119
7.11	<a href="#">IAXIv2Transaction.cs File Reference</a>	119
7.12	<a href="#">IAXIv2TransactionBeat.cs File Reference</a>	120
7.13	<a href="#">IAXIv2TransactionBeats.cs File Reference</a>	120
7.14	<a href="#">IAXIv2Transactions.cs File Reference</a>	120
7.15	<a href="#">ICache.cs File Reference</a>	120
7.16	<a href="#">ICapiDataCorrelatedValue.cs File Reference</a>	121

7.17 ICapiDataCorrelatedValues.cs File Reference . . . . .	121
7.18 ICapiDataNumericValue.cs File Reference . . . . .	121
7.19 ICapiDataNumericValues.cs File Reference . . . . .	121
7.20 ICapiDataSymbolValue.cs File Reference . . . . .	122
7.21 ICapiDataSymbolValues.cs File Reference . . . . .	122
7.22 ICapiStream.cs File Reference . . . . .	122
7.23 ICapiStreamChannel.cs File Reference . . . . .	122
7.24 ICapiStreamChannels.cs File Reference . . . . .	123
7.25 ICapiStreamChannelSymbol.cs File Reference . . . . .	123
7.26 ICapiStreamChannelSymbols.cs File Reference . . . . .	123
7.27 ICapiStreams.cs File Reference . . . . .	123
7.28 ICHITransaction.cs File Reference . . . . .	124
7.29 ICHITransactionFlit.cs File Reference . . . . .	124
7.30 ICHITransactionFlits.cs File Reference . . . . .	124
7.31 ICHITransactions.cs File Reference . . . . .	124
7.32 IComponent.cs File Reference . . . . .	125
7.33 IComponentParameter.cs File Reference . . . . .	125
7.34 IComponentParameters.cs File Reference . . . . .	125
7.35 IComponents.cs File Reference . . . . .	125
7.36 IDataset.cs File Reference . . . . .	126
7.37 IFunctionStream.cs File Reference . . . . .	126
7.38 IFunctionStreams.cs File Reference . . . . .	126
7.39 IFunctionTrace.cs File Reference . . . . .	126
7.40 IFunctionTraces.cs File Reference . . . . .	127
7.41 IMetaData.cs File Reference . . . . .	127
7.42 IProtection.cs File Reference . . . . .	127
7.43 ISimulationWindow.cs File Reference . . . . .	128
7.44 ISimulationWindows.cs File Reference . . . . .	128
7.45 ITransactionStream.cs File Reference . . . . .	128
7.46 ITransactionStreams.cs File Reference . . . . .	128

# Chapter 1

## Namespace Index

### 1.1 Packages

Here are the packages with brief descriptions (if available):

<a href="#">CarbonAnalyzerAPI</a> . . . . .	9
<a href="#">CarbonAnalyzerAPI.Interfaces</a> The namespace associated with all interfaces. . . . .	9



## Chapter 2

# Hierarchical Index

### 2.1 Class Hierarchy

This inheritance list is sorted roughly, but not completely, alphabetically:

CarbonAnalyzerAPI.CycleRange . . . . .	13
CarbonAnalyzerAPI.Interfaces.IAXI4ACETransaction . . . . .	16
CarbonAnalyzerAPI.Interfaces.IAXI4ACETransactionBeat . . . . .	20
CarbonAnalyzerAPI.Interfaces.IAXI4ACETransactionBeats . . . . .	22
CarbonAnalyzerAPI.Interfaces.IAXI4Transaction . . . . .	24
CarbonAnalyzerAPI.Interfaces.IAXI4TransactionBeat . . . . .	29
CarbonAnalyzerAPI.Interfaces.IAXI4TransactionBeats . . . . .	30
CarbonAnalyzerAPI.Interfaces.IAXIv2Transaction . . . . .	33
CarbonAnalyzerAPI.Interfaces.IAXIv2TransactionBeat . . . . .	37
CarbonAnalyzerAPI.Interfaces.IAXIv2TransactionBeats . . . . .	38
CarbonAnalyzerAPI.Interfaces.ICache . . . . .	41
CarbonAnalyzerAPI.Interfaces.ICapiDataCorrelatedValue . . . . .	41
CarbonAnalyzerAPI.Interfaces.ICapiDataCorrelatedValues . . . . .	42
CarbonAnalyzerAPI.Interfaces.ICapiDataNumericValue . . . . .	43
CarbonAnalyzerAPI.Interfaces.ICapiDataNumericValues . . . . .	43
CarbonAnalyzerAPI.Interfaces.ICapiDataSymbolValue . . . . .	44
CarbonAnalyzerAPI.Interfaces.ICapiDataSymbolValues . . . . .	45
CarbonAnalyzerAPI.Interfaces.ICapiStream . . . . .	45
CarbonAnalyzerAPI.Interfaces.ICapiStreamChannel . . . . .	47
CarbonAnalyzerAPI.Interfaces.ICapiStreamChannelSymbol . . . . .	52
CarbonAnalyzerAPI.Interfaces.ICHITransaction . . . . .	55
CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit . . . . .	56
CarbonAnalyzerAPI.Interfaces.ICHITransactionFlits . . . . .	91
CarbonAnalyzerAPI.Interfaces.IComponent . . . . .	98
CarbonAnalyzerAPI.Interfaces.IComponentParameter . . . . .	100
CarbonAnalyzerAPI.Interfaces.IDataset . . . . .	105
IEnumerable< IAXI4ACETransaction >	
CarbonAnalyzerAPI.Interfaces.IAXI4ACETransactions . . . . .	23
IEnumerable< IAXI4Transaction >	
CarbonAnalyzerAPI.Interfaces.IAXI4Transactions . . . . .	31
IEnumerable< IAXIv2Transaction >	
CarbonAnalyzerAPI.Interfaces.IAXIv2Transactions . . . . .	39
IEnumerable< ICapiStream >	
CarbonAnalyzerAPI.Interfaces.ICapiStreams . . . . .	54
IEnumerable< ICapiStreamChannel >	
CarbonAnalyzerAPI.Interfaces.ICapiStreamChannels . . . . .	50
IEnumerable< ICapiStreamChannelSymbol >	
CarbonAnalyzerAPI.Interfaces.ICapiStreamChannelSymbols . . . . .	53

IEnumerable< ICHITransaction >	
CarbonAnalyzerAPI.Interfaces.ICHITransactions . . . . .	95
IEnumerable< IComponent >	
CarbonAnalyzerAPI.Interfaces.IComponents . . . . .	102
IEnumerable< IComponentParameter >	
CarbonAnalyzerAPI.Interfaces.IComponentParameters . . . . .	101
IEnumerable< IFunctionStream >	
CarbonAnalyzerAPI.Interfaces.IFunctionStreams . . . . .	107
IEnumerable< ISimulationWindow >	
CarbonAnalyzerAPI.Interfaces.ISimulationWindows . . . . .	113
IEnumerable< ITransactionStream >	
CarbonAnalyzerAPI.Interfaces.ITransactionStreams . . . . .	115
CarbonAnalyzerAPI.Interfaces.IFunctionStream . . . . .	105
CarbonAnalyzerAPI.Interfaces.IFunctionTrace . . . . .	108
CarbonAnalyzerAPI.Interfaces.IFunctionTraces . . . . .	109
CarbonAnalyzerAPI.Interfaces.IMetaData . . . . .	110
CarbonAnalyzerAPI.Interfaces.INamedObject . . . . .	111
CarbonAnalyzerAPI.Interfaces.IAnalyzer . . . . .	14
CarbonAnalyzerAPI.Interfaces.IProtection . . . . .	111
CarbonAnalyzerAPI.Interfaces.ISimulationWindow . . . . .	112
CarbonAnalyzerAPI.Interfaces.ITransactionStream . . . . .	113

## Chapter 3

# Class Index

### 3.1 Class List

Here are the classes, structs, unions and interfaces with brief descriptions:

<a href="#">CarbonAnalyzerAPI.CycleRange</a>	
The interface to a <a href="#">CycleRange</a> Class . . . . .	13
<a href="#">CarbonAnalyzerAPI.Interfaces.IAnalyzer</a>	
The top level interface to the Analyzer. . . . .	14
<a href="#">CarbonAnalyzerAPI.Interfaces.IAXI4ACETransaction</a>	
The interface to an AXI4ACETransaction . . . . .	16
<a href="#">CarbonAnalyzerAPI.Interfaces.IAXI4ACETransactionBeat</a>	
The interface to each AXI4ACETransactionBeat. . . . .	20
<a href="#">CarbonAnalyzerAPI.Interfaces.IAXI4ACETransactionBeats</a>	
The interface to the collection of AXI4ACETransactionBeats. . . . .	22
<a href="#">CarbonAnalyzerAPI.Interfaces.IAXI4ACETransactions</a>	
The interface to the collection of AXI4ACETransactions. . . . .	23
<a href="#">CarbonAnalyzerAPI.Interfaces.IAXI4Transaction</a>	
The interface to each AXI4Transaction. . . . .	24
<a href="#">CarbonAnalyzerAPI.Interfaces.IAXI4TransactionBeat</a>	
The interface to each AXI4TransactionBeat. . . . .	29
<a href="#">CarbonAnalyzerAPI.Interfaces.IAXI4TransactionBeats</a>	
The interface to the collection of AXI4TransactionBeats. . . . .	30
<a href="#">CarbonAnalyzerAPI.Interfaces.IAXI4Transactions</a>	
The interface to the collection of AXI4Transactions. . . . .	31
<a href="#">CarbonAnalyzerAPI.Interfaces.IAXIv2Transaction</a>	
The interface to each AXIv2Transaction. . . . .	33
<a href="#">CarbonAnalyzerAPI.Interfaces.IAXIv2TransactionBeat</a>	
The interface to each AXIv2TransactionBeat. . . . .	37
<a href="#">CarbonAnalyzerAPI.Interfaces.IAXIv2TransactionBeats</a>	
The interface to the collection of AXIv2TransactionBeats. . . . .	38
<a href="#">CarbonAnalyzerAPI.Interfaces.IAXIv2Transactions</a>	
The interface to the collection of AXIv2Transactions. . . . .	39
<a href="#">CarbonAnalyzerAPI.Interfaces.ICache</a>	
This interface applies to transactions and can be used to find out if the transaction is bufferable, cacheable, or whether write or read allocation is mandatory. . . . .	41
<a href="#">CarbonAnalyzerAPI.Interfaces.ICapiDataCorrelatedValue</a>	
The interface to event data for each cycle. . . . .	41
<a href="#">CarbonAnalyzerAPI.Interfaces.ICapiDataCorrelatedValues</a>	
The interface to the collection of CapiDataCorrelatedValues. . . . .	42
<a href="#">CarbonAnalyzerAPI.Interfaces.ICapiDataNumericValue</a>	
The interface to event data for each cycle. . . . .	43

<a href="#">CarbonAnalyzerAPI.Interfaces.ICapiDataNumericValues</a>	
The interface to the collection of CapiDataNumericValues. . . . .	43
<a href="#">CarbonAnalyzerAPI.Interfaces.ICapiDataSymbolValue</a>	
The interface to assess the number of times particular event values occur. Applies only on channels that are of type symbol. . . . .	44
<a href="#">CarbonAnalyzerAPI.Interfaces.ICapiDataSymbolValues</a>	
The interface to the collection of CapiDataSymbolValues. . . . .	45
<a href="#">CarbonAnalyzerAPI.Interfaces.ICapiStream</a>	
The interface to each capi stream. . . . .	45
<a href="#">CarbonAnalyzerAPI.Interfaces.ICapiStreamChannel</a>	
The interface to each CapiStreamChannel. . . . .	47
<a href="#">CarbonAnalyzerAPI.Interfaces.ICapiStreamChannels</a>	
The interface to the collection of CapiStreamChannels. . . . .	50
<a href="#">CarbonAnalyzerAPI.Interfaces.ICapiStreamChannelSymbol</a>	
The interface to each CapiStreamChannelSymbol . . . . .	52
<a href="#">CarbonAnalyzerAPI.Interfaces.ICapiStreamChannelSymbols</a>	
The interface to the collection of CapiStreamChannelSymbols. . . . .	53
<a href="#">CarbonAnalyzerAPI.Interfaces.ICapiStreams</a>	
The interface to the collection of CapiStreams. . . . .	54
<a href="#">CarbonAnalyzerAPI.Interfaces.ICHITransaction</a>	
The interface to each CHITransaction. . . . .	55
<a href="#">CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit</a>	
The interface to each CHITransactionFlit. . . . .	56
<a href="#">CarbonAnalyzerAPI.Interfaces.ICHITransactionFlits</a>	
The interface to the collection of CHITransactionFlits. . . . .	91
<a href="#">CarbonAnalyzerAPI.Interfaces.ICHITransactions</a>	
The interface to the collection of CHITransactions. . . . .	95
<a href="#">CarbonAnalyzerAPI.Interfaces.IComponent</a>	
The interface to each component. . . . .	98
<a href="#">CarbonAnalyzerAPI.Interfaces.IComponentParameter</a>	
The interface to each component parameter. . . . .	100
<a href="#">CarbonAnalyzerAPI.Interfaces.IComponentParameters</a>	
The interface to the collection of component parameters. . . . .	101
<a href="#">CarbonAnalyzerAPI.Interfaces.IComponents</a>	
The interface to the collection of components. . . . .	102
<a href="#">CarbonAnalyzerAPI.Interfaces.IDataSet</a>	
The interface to a particular DataSet. . . . .	105
<a href="#">CarbonAnalyzerAPI.Interfaces.IFunctionStream</a>	
The interface to a particular FunctionStream. . . . .	105
<a href="#">CarbonAnalyzerAPI.Interfaces.IFunctionStreams</a>	
The interface to the collection of FunctionStreams. . . . .	107
<a href="#">CarbonAnalyzerAPI.Interfaces.IFunctionTrace</a>	
The interface to each FunctionTrace. . . . .	108
<a href="#">CarbonAnalyzerAPI.Interfaces.IFunctionTraces</a>	
The interface to the collection of FunctionTraces. . . . .	109
<a href="#">CarbonAnalyzerAPI.Interfaces.IMetaData</a>	
The interface to each MetaData object. . . . .	110
<a href="#">CarbonAnalyzerAPI.Interfaces.INamedObject</a>	
<a href="#">CarbonAnalyzerAPI.Interfaces.IProtection</a>	
The interface to the Protection associated with a particular transaction. . . . .	111
<a href="#">CarbonAnalyzerAPI.Interfaces.ISimulationWindow</a>	
The interface to each CapiStreamSimulationWindow. . . . .	112
<a href="#">CarbonAnalyzerAPI.Interfaces.ISimulationWindows</a>	
The interface to the collection of CapiStreamSimulationWindows. . . . .	113
<a href="#">CarbonAnalyzerAPI.Interfaces.ITransactionStream</a>	
The interface to each TransactionStream. . . . .	113
<a href="#">CarbonAnalyzerAPI.Interfaces.ITransactionStreams</a>	
The collection of TransactionStreams. . . . .	115



## Chapter 4

# File Index

### 4.1 File List

Here is a list of all files with brief descriptions:

CycleRange.cs	117
IAnalyzer.cs	117
IAXI4ACETransaction.cs	117
IAXI4ACETransactionBeat.cs	118
IAXI4ACETransactionBeats.cs	118
IAXI4ACETransactions.cs	118
IAXI4Transaction.cs	118
IAXI4TransactionBeat.cs	119
IAXI4TransactionBeats.cs	119
IAXI4Transactions.cs	119
IAXIv2Transaction.cs	119
IAXIv2TransactionBeat.cs	120
IAXIv2TransactionBeats.cs	120
IAXIv2Transactions.cs	120
ICache.cs	120
ICapiDataCorrelatedValue.cs	121
ICapiDataCorrelatedValues.cs	121
ICapiDataNumericValue.cs	121
ICapiDataNumericValues.cs	121
ICapiDataSymbolValue.cs	122
ICapiDataSymbolValues.cs	122
ICapiStream.cs	122
ICapiStreamChannel.cs	122
ICapiStreamChannels.cs	123
ICapiStreamChannelSymbol.cs	123
ICapiStreamChannelSymbols.cs	123
ICapiStreams.cs	123
ICHITransaction.cs	124
ICHITransactionFlit.cs	124
ICHITransactionFlits.cs	124
ICHITransactions.cs	124
IComponent.cs	125
IComponentParameter.cs	125
IComponentParameters.cs	125
IComponents.cs	125
IDataSet.cs	126
IFunctionStream.cs	126
IFunctionStreams.cs	126

<a href="#">IFunctionTrace.cs</a>	126
<a href="#">IFunctionTraces.cs</a>	127
<a href="#">IMetaData.cs</a>	127
<a href="#">IProtection.cs</a>	127
<a href="#">ISimulationWindow.cs</a>	128
<a href="#">ISimulationWindows.cs</a>	128
<a href="#">ITransactionStream.cs</a>	128
<a href="#">ITransactionStreams.cs</a>	128

## Chapter 5

# Namespace Documentation

### 5.1 Package CarbonAnalyzerAPI

#### Namespaces

- package [Interfaces](#)

*The namespace associated with all interfaces.*

#### Classes

- class [CycleRange](#)

*The interface to a [CycleRange](#) Class*

### 5.2 Package CarbonAnalyzerAPI.Interfaces

The namespace associated with all interfaces.

#### Classes

- interface [INamedObject](#)
- interface [IAnalyzer](#)  
*The top level interface to the Analyzer.*
- interface [IAXI4ACETransaction](#)  
*The interface to an AXI4ACETransaction*
- interface [IAXI4ACETransactionBeat](#)  
*The interface to each AXI4ACETransactionBeat.*
- interface [IAXI4ACETransactionBeats](#)  
*The interface to the collection of AXI4ACETransactionBeats.*
- interface [IAXI4ACETransactions](#)  
*The interface to the collection of AXI4ACETransactions.*
- interface [IAXI4Transaction](#)  
*The interface to each AXI4Transaction.*
- interface [IAXI4TransactionBeat](#)  
*The interface to each AXI4TransactionBeat.*
- interface [IAXI4TransactionBeats](#)  
*The interface to the collection of AXI4TransactionBeats.*

- interface [IAXI4Transactions](#)  
*The interface to the collection of AXI4Transactions.*
- interface [IAXIv2Transaction](#)  
*The interface to each AXIv2Transaction.*
- interface [IAXIv2TransactionBeat](#)  
*The interface to each AXIv2TransactionBeat.*
- interface [IAXIv2TransactionBeats](#)  
*The interface to the collection of AXIv2TransactionBeats.*
- interface [IAXIv2Transactions](#)  
*The interface to the collection of AXIv2Transactions.*
- interface [ICache](#)  
*This interface applies to transactions and can be used to find out if the transaction is bufferable, cacheable, or whether write or read allocation is mandatory.*
- interface [ICapiDataCorrelatedValue](#)  
*The interface to event data for each cycle.*
- interface [ICapiDataCorrelatedValues](#)  
*The interface to the collection of CapiDataCorrelatedValues.*
- interface [ICapiDataNumericValue](#)  
*The interface to event data for each cycle.*
- interface [ICapiDataNumericValues](#)  
*The interface to the collection of CapiDataNumericValues.*
- interface [ICapiDataSymbolValue](#)  
*The interface to assess the number of times particular event values occur. Applies only on channels that are of type symbol.*
- interface [ICapiDataSymbolValues](#)  
*The interface to the collection of CapiDataSymbolValues.*
- interface [ICapiStream](#)  
*The interface to each capi stream.*
- interface [ICapiStreamChannel](#)  
*The interface to each CapiStreamChannel.*
- interface [ICapiStreamChannels](#)  
*The interface to the collection of CapiStreamChannels.*
- interface [ICapiStreamChannelSymbol](#)  
*The interface to each CapiStreamChannelSymbol*
- interface [ICapiStreamChannelSymbols](#)  
*The interface to the collection of CapiStreamChannelSymbols.*
- interface [ICapiStreams](#)  
*The interface to the collection of CapiStreams.*
- interface [ICHITransaction](#)  
*The interface to each CHITransaction.*
- interface [ICHITransactionFlit](#)  
*The interface to each CHITransactionFlit.*
- interface [ICHITransactionFlits](#)  
*The interface to the collection of CHITransactionFlits.*
- interface [ICHITransactions](#)  
*The interface to the collection of CHITransactions.*
- interface [IComponent](#)  
*The interface to each component.*
- interface [IComponentParameter](#)  
*The interface to each component parameter.*
- interface [IComponentParameters](#)

- The interface to the collection of component parameters.*

  - interface [IComponents](#)

*The interface to the collection of components.*
  - interface [IDataSet](#)

*The interface to a particular DataSet.*
  - interface [IFunctionStream](#)

*The interface to a particular FunctionStream.*
  - interface [IFunctionStreams](#)

*The interface to the collection of FunctionStreams.*
  - interface [IFunctionTrace](#)

*The interface to each FunctionTrace.*
  - interface [IFunctionTraces](#)

*The interface to the collection of FunctionTraces.*
  - interface [IMetaData](#)

*The interface to each MetaData object.*
  - interface [IProtection](#)

*The interface to the Protection associated with a particular transaction.*
  - interface [ISimulationWindow](#)

*The interface to each CapiStreamSimulationWindow.*
  - interface [ISimulationWindows](#)

*The interface to the collection of CapiStreamSimulationWindows.*
  - interface [ITransactionStream](#)

*The interface to each TransactionStream.*
  - interface [ITransactionStreams](#)

*The collection of TransactionStreams.*

## Enumerations

- enum [ChannelTypes](#) { [ChannelTypes.Symbol](#), [ChannelTypes.Numeric](#) }
 

*The enumerated type indicating the type of a particular channel.*
- enum [TraceType](#) { [TraceType.Call](#), [TraceType.Return](#) }
 

*The particular TraceType. Applies to FunctionTraces.*
- enum [TransactionStreamTypes](#) { [TransactionStreamTypes.AXI](#), [TransactionStreamTypes.AXI4](#), [TransactionStreamTypes.AXI4ACE](#), [TransactionStreamTypes.CHI](#) }
 

*The transaction types that are available specified when adding a TransactionStream.*

### 5.2.1 Detailed Description

The namespace associated with all interfaces.

### 5.2.2 Enumeration Type Documentation

#### 5.2.2.1 enum CarbonAnalyzerAPI.Interfaces.ChannelTypes

The enumerated type indicating the type of a particular channel.

Enumerator

**Symbol**

**Numeric**

#### 5.2.2.2 enum CarbonAnalyzerAPI.Interfaces.TraceType

The particular TraceType. Applies to FunctionTraces.

Enumerator

***Call***

***Return***

#### 5.2.2.3 enum CarbonAnalyzerAPI.Interfaces.TransactionStreamTypes

The transaction types that are available specified when adding a TransactionStream.

Enumerator

***AXI***

***AXI4***

***AXI4ACE***

***CHI***

## Chapter 6

# Class Documentation

### 6.1 CarbonAnalyzerAPI.CycleRange Class Reference

The interface to a [CycleRange](#) Class

#### Public Member Functions

- [CycleRange](#) ()
- [CycleRange](#) (UInt64 from, UInt64 to)
- string [SQL](#) (string columnName)

#### Static Public Member Functions

- static [CycleRange ToEnding](#) (UInt64 from)  
*Returns a [CycleRange](#) object from the specified beginning cycle to the end cycle.*
- static [CycleRange FromTo](#) (UInt64 from, UInt64 to)  
*Returns a [CycleRange](#) object from the specified beginning cycle to the specified ending cycle.*
- static [CycleRange FromBeginning](#) (UInt64 to)  
*Returns a [CycleRange](#) object from the beginning cycle to the specified end cycle.*

#### Properties

- UInt64 [Start](#) [get, set]  
*The start cycle of a range. Can be set or retrieved.*
- UInt64 [End](#) [get, set]  
*The end cycle of a range. Can be set or retrieved.*
- static [CycleRange All](#) [get]  
*The entire range from start to end cycle.*
- bool [SpecifiedRange](#) [get]
- bool [StartToRange](#) [get]
- bool [FullRange](#) [get]
- bool [SpecifiedToEnd](#) [get]

#### 6.1.1 Detailed Description

The interface to a [CycleRange](#) Class

## 6.1.2 Constructor & Destructor Documentation

### 6.1.2.1 CarbonAnalyzerAPI.CycleRange.CycleRange ( )

### 6.1.2.2 CarbonAnalyzerAPI.CycleRange.CycleRange ( UInt64 from, UInt64 to )

## 6.1.3 Member Function Documentation

### 6.1.3.1 static CycleRange CarbonAnalyzerAPI.CycleRange.FromBeginning ( UInt64 to ) [static]

Returns a [CycleRange](#) object from the beginning cycle to the specified end cycle.

### 6.1.3.2 static CycleRange CarbonAnalyzerAPI.CycleRange.FromTo ( UInt64 from, UInt64 to ) [static]

Returns a [CycleRange](#) object from the specified beginning cycle to the specified ending cycle.

### 6.1.3.3 string CarbonAnalyzerAPI.CycleRange.SQL ( string columnName )

### 6.1.3.4 static CycleRange CarbonAnalyzerAPI.CycleRange.ToEnding ( UInt64 from ) [static]

Returns a [CycleRange](#) object from the specified beginning cycle to the end cycle.

## 6.1.4 Property Documentation

### 6.1.4.1 CycleRange CarbonAnalyzerAPI.CycleRange.All [static], [get]

The entire range from start to end cycle.

### 6.1.4.2 UInt64 CarbonAnalyzerAPI.CycleRange.End [get], [set]

The end cycle of a range. Can be set or retrieved.

### 6.1.4.3 bool CarbonAnalyzerAPI.CycleRange.FullRange [get]

### 6.1.4.4 bool CarbonAnalyzerAPI.CycleRange.SpecifiedToEnd [get]

### 6.1.4.5 bool CarbonAnalyzerAPI.CycleRange.SpecifiedRange [get]

### 6.1.4.6 UInt64 CarbonAnalyzerAPI.CycleRange.Start [get], [set]

The start cycle of a range. Can be set or retrieved.

### 6.1.4.7 bool CarbonAnalyzerAPI.CycleRange.StartToRange [get]

The documentation for this class was generated from the following file:

- [CycleRange.cs](#)

## 6.2 CarbonAnalyzerAPI.Interfaces.IAnalyzer Interface Reference

The top level interface to the Analyzer.



## Public Member Functions

- [IAnalyzer Open](#) (string *databaseName*)  
*Open a database by the specified name.*
- bool [CreateDatabase](#) (string *databaseName*)  
*Create a database with the specified name. e.g. c:.profile*

## Properties

- [ICapiStreams ProfileStreams](#) [get]  
*The collection of profile streams associated with the open database.*
- [ITransactionStreams TransactionStreams](#) [get]  
*The collection of transaction streams associated with the open database.*
- [IFunctionStreams FunctionStreams](#) [get]  
*The collection of function streams associated with the open database.*
- [IComponents Components](#) [get]  
*The collection of components from the design used to construct this database.*
- [IMetaData MetaData](#) [get]  
*Metadata about particular designs*

### 6.2.1 Detailed Description

The top level interface to the Analyzer.

### 6.2.2 Member Function Documentation

#### 6.2.2.1 bool CarbonAnalyzerAPI.Interfaces.IAnalyzer.CreateDatabase ( string *databaseName* )

Create a database with the specified name. e.g. c:.profile

##### Parameters

<i>databaseName</i>	the name of the database. e.g. c:.profile or newDB.profile
---------------------	--

##### Returns

Returns true if the database was successfully created.

#### 6.2.2.2 IAnalyzer CarbonAnalyzerAPI.Interfaces.IAnalyzer.Open ( string *databaseName* )

Open a database by the specified name.

##### Parameters

<i>databaseName</i>	The name of the database. e.g. c:.profile or testDB.profile
---------------------	---

##### Returns

Returns true if successfully opened.

### 6.2.3 Property Documentation

#### 6.2.3.1 IComponents CarbonAnalyzerAPI.Interfaces.IAnalyzer.Components [get]

The collection of components from the design used to construct this database.

### 6.2.3.2 IFunctionStreams CarbonAnalyzerAPI.Interfaces.IAnalyzer.FunctionStreams [get]

The collection of function streams associated with the open database.

### 6.2.3.3 IMetaData CarbonAnalyzerAPI.Interfaces.IAnalyzer.MetaData [get]

Metadata about particular designs

### 6.2.3.4 ICapiStreams CarbonAnalyzerAPI.Interfaces.IAnalyzer.ProfileStreams [get]

The collection of profile streams associated with the open database.

### 6.2.3.5 ITransactionStreams CarbonAnalyzerAPI.Interfaces.IAnalyzer.TransactionStreams [get]

The collection of transaction streams associated with the open database.

The documentation for this interface was generated from the following file:

- [IAnalyzer.cs](#)

## 6.3 CarbonAnalyzerAPI.Interfaces.IAXI4ACETransaction Interface Reference

The interface to an AXI4ACETransaction

### Properties

- Int64 [ID](#) [get]  
*The ID of this particular transaction.*
- Int64 [TransactionConnectionID](#) [get]  
*The particular connection ID associated with this transaction.*
- CarbonEnum.Transaction.Command [Command](#) [get, set]  
*The particular read/write or unspecified cmd associated with this transaction.*
- Int64 [Address](#) [get, set]  
*The AXI transactions physical base address.*
- Int64 [DataBeats](#) [get, set]  
*The number of data beats in the transaction.*
- Int64 [DataWidth](#) [get, set]  
*The width of the transaction data beats in bytes.*
- Int64 [DataLength](#) [get, set]  
*The total number of bytes in the transaction (TLM2).*
- Int64 [ByteEnableLength](#) [get, set]  
*THE TLM2 byte enable length.*
- Int64 [StreamingWidth](#) [get, set]  
*The TLM2 streaming width.*
- Int64 [InterConnectID](#) [get, set]  
*Internal connection id.*
- Int64 [XactionID](#) [get, set]  
*The AXI transaction ID (AxID)*
- Int64 [AddressStart](#) [get, set]  
*The cycle number for the start of the address phase.*

- Int64 [AddressComplete](#) [get, set]  
*The cycle number for the completion of the address phase.*
- Int64 [ResponseStart](#) [get, set]  
*The cycle number for the start of the response phase. (This is only used for writes).*
- Int64 [ResponseComplete](#) [get, set]  
*The cycle number for the completion of the response phase. (This is only used for writes).*
- Int64 [TID](#) [get, set]  
*Temporary id when going from 1 phase to another.*
- Int64 [Length](#) [get, set]  
*The length attributes of the transaction*
- CarbonEnum.Transaction.Size [AxisSize](#) [get, set]  
*The size attributes of the transaction*
- CarbonEnum.Transaction.Burst [AxBurst](#) [get, set]  
*The burst attributes of the transaction*
- CarbonEnum.Transaction.Lock [AxLock](#) [get, set]  
*The lock attributes of the transaction*
- [ICache Cache](#) [get]  
*The cache attributes of the transaction*  
*Use the get\* and set\* methods to get and set information about the cache.*
- [IProtection Protection](#) [get]  
*The protection attributes of the transaction*  
*Use the get\* and set\* methods to get and set information about the protection.*
- CarbonEnum.Transaction.Response [Response](#) [get, set]  
*Response value.*
- Int64 [QOS](#) [get, set]  
*Quality of Service, QoS. The QoS identifier sent for each write transaction*
- Int64 [Region](#) [get, set]  
*Region identifier. Permits a single physical interface on a slave to be used for multiple logical interfaces.*
- Int64 [UserAddress](#) [get, set]  
*Please see amba/axi/ace protocol specification.*
- Int64 [UserBitWidth](#) [get, set]  
*Please see amba/axi/ace protocol specification.*
- Int64 [UserResponse](#) [get, set]  
*Please see amba/axi/ace protocol specification.*
- Int64 [TransactionLatency](#) [get, set]  
*Please see amba/axi/ace protocol specification.*
- CarbonEnum.Transaction.TransactionType [TransactionType](#) [get, set]  
*The transaction type. Type CarbonEnum.Transaction.TransactionType. to see a list of valid types.*
- [IAXI4ACETransactionBeats TransactionsBeats](#) [get]  
*The collection of transactionBeats for this transaction.*

### 6.3.1 Detailed Description

The interface to an AXI4ACETransaction

### 6.3.2 Property Documentation

#### 6.3.2.1 Int64 CarbonAnalyzerAPI.Interfaces.IAXI4ACETransaction.Address [get], [set]

The AXI transactions physical base address.

**6.3.2.2 Int64 CarbonAnalyzerAPI.Interfaces.IAXI4ACETransaction.AddressComplete** [get], [set]

The cycle number for the completion of the address phase.

**6.3.2.3 Int64 CarbonAnalyzerAPI.Interfaces.IAXI4ACETransaction.AddressStart** [get], [set]

The cycle number for the start of the address phase.

**6.3.2.4 CarbonEnum.Transaction.Burst CarbonAnalyzerAPI.Interfaces.IAXI4ACETransaction.AxBurst** [get], [set]

The burst attributes of the transaction

**6.3.2.5 CarbonEnum.Transaction.Lock CarbonAnalyzerAPI.Interfaces.IAXI4ACETransaction.AxLock** [get], [set]

The lock attributes of the transaction

**6.3.2.6 CarbonEnum.Transaction.Size CarbonAnalyzerAPI.Interfaces.IAXI4ACETransaction.AxSize** [get], [set]

The size attributes of the transaction

**6.3.2.7 Int64 CarbonAnalyzerAPI.Interfaces.IAXI4ACETransaction.ByteEnableLength** [get], [set]

THE TLM2 byte enable length.

**6.3.2.8 ICache CarbonAnalyzerAPI.Interfaces.IAXI4ACETransaction.Cache** [get]

The cache attributes of the transaction

Use the get\* and set\* methods to get and set information about the cache.

**6.3.2.9 CarbonEnum.Transaction.Command CarbonAnalyzerAPI.Interfaces.IAXI4ACETransaction.Command** [get], [set]

The particular read/write or unspecified cmd associated with this transaction.

**6.3.2.10 Int64 CarbonAnalyzerAPI.Interfaces.IAXI4ACETransaction.DataBeats** [get], [set]

The number of data beats in the transaction.

**6.3.2.11 Int64 CarbonAnalyzerAPI.Interfaces.IAXI4ACETransaction.DataLength** [get], [set]

The total number of bytes in the transaction (TLM2).

**6.3.2.12 Int64 CarbonAnalyzerAPI.Interfaces.IAXI4ACETransaction.DataWidth** [get], [set]

The width of the transaction data beats in bytes.

**6.3.2.13 Int64 CarbonAnalyzerAPI.Interfaces.IAXI4ACETransaction.ID** [get]

The ID of this particular transaction.

**6.3.2.14 Int64 CarbonAnalyzerAPI.Interfaces.IAXI4ACETransaction.InterConnectID** [get], [set]

Internal connection id.

**6.3.2.15 Int64 CarbonAnalyzerAPI.Interfaces.IAXI4ACETransaction.Length** [get], [set]

The length attributes of the transaction

**6.3.2.16 IPProtection CarbonAnalyzerAPI.Interfaces.IAXI4ACETransaction.Protection** [get]

The protection attributes of the transaction

Use the get\* and set\* methods to get and set information about the protection.

**6.3.2.17 Int64 CarbonAnalyzerAPI.Interfaces.IAXI4ACETransaction.QOS** [get], [set]

Quality of Service, QoS. The QoS identifier sent for each write transaction

**6.3.2.18 Int64 CarbonAnalyzerAPI.Interfaces.IAXI4ACETransaction.Region** [get], [set]

Region identifier. Permits a single physical interface on a slave to be used for multiple logical interfaces.

**6.3.2.19 CarbonEnum.Transaction.Response CarbonAnalyzerAPI.Interfaces.IAXI4ACETransaction.Response** [get], [set]

Response value.

**6.3.2.20 Int64 CarbonAnalyzerAPI.Interfaces.IAXI4ACETransaction.ResponseComplete** [get], [set]

The cycle number for the completion of the response phase. (This is only used for writes).

**6.3.2.21 Int64 CarbonAnalyzerAPI.Interfaces.IAXI4ACETransaction.ResponseStart** [get], [set]

The cycle number for the start of the response phase. (This is only used for writes).

**6.3.2.22 Int64 CarbonAnalyzerAPI.Interfaces.IAXI4ACETransaction.StreamingWidth** [get], [set]

The TLM2 streaming width.

**6.3.2.23 Int64 CarbonAnalyzerAPI.Interfaces.IAXI4ACETransaction.TID** [get], [set]

Temporary id when going from 1 phase to another.

**6.3.2.24 Int64 CarbonAnalyzerAPI.Interfaces.IAXI4ACETransaction.TransactionConnectionID** [get]

The particular connection ID associated with this transaction.

**6.3.2.25 Int64 CarbonAnalyzerAPI.Interfaces.IAXI4ACETransaction.TransactionLatency** [get], [set]

Please see amba/axi/ace protocol specification.

### 6.3.2.26 `IAXI4ACETransactionBeats` `CarbonAnalyzerAPI.Interfaces.IAXI4ACETransaction.TransactionsBeats` [get]

The collection of transactionBeats for this transaction.

### 6.3.2.27 `CarbonEnum.Transaction.TransactionType` `CarbonAnalyzerAPI.Interfaces.IAXI4ACETransaction.TransactionType` [get], [set]

The transaction type. Type `CarbonEnum.Transaction.TransactionType`. to see a list of valid types.

### 6.3.2.28 `Int64` `CarbonAnalyzerAPI.Interfaces.IAXI4ACETransaction.UserAddress` [get], [set]

Please see amba/axi/ace protocol specification.

### 6.3.2.29 `Int64` `CarbonAnalyzerAPI.Interfaces.IAXI4ACETransaction.UserBitWidth` [get], [set]

Please see amba/axi/ace protocol specification.

### 6.3.2.30 `Int64` `CarbonAnalyzerAPI.Interfaces.IAXI4ACETransaction.UserResponse` [get], [set]

Please see amba/axi/ace protocol specification.

### 6.3.2.31 `Int64` `CarbonAnalyzerAPI.Interfaces.IAXI4ACETransaction.XactionID` [get], [set]

The AXI transaction ID (AxID)

The documentation for this interface was generated from the following file:

- [IAXI4ACETransaction.cs](#)

## 6.4 `CarbonAnalyzerAPI.Interfaces.IAXI4ACETransactionBeat` Interface Reference

The interface to each `AXI4ACETransactionBeat`.

### Properties

- `Int64 ID` [get]  
*The unique ID for this transactionBeat.*
- `Int64 TransactionID` [get]  
*The associated transaction with this transactionBeat.*
- `Int64 DataBeat` [get, set]  
*The particular dataBeat within the transaction.*
- `Int64 DataLow` [get, set]  
*The low 64 bits of data.*
- `Int64 DataHigh` [get, set]  
*The high 64 bits of data.*
- `Int64 StrobeLow` [get, set]  
*The AXI WSTRB signal low.*
- `Int64 StrobeHigh` [get, set]  
*The AXI WSTRB signal high.*
- `Int64 BeatStart` [get, set]

*The cycle number this beat starts.*

- Int64 **BeatComplete** [get, set]

*The cycle number this beat completes.*

- Int64 **UserData** [get, set]

*UserData*

### 6.4.1 Detailed Description

The interface to each AXI4ACETransactionBeat.

### 6.4.2 Property Documentation

#### 6.4.2.1 Int64 CarbonAnalyzerAPI.Interfaces.IAXI4ACETransactionBeat.BeatComplete [get], [set]

The cycle number this beat completes.

#### 6.4.2.2 Int64 CarbonAnalyzerAPI.Interfaces.IAXI4ACETransactionBeat.BeatStart [get], [set]

The cycle number this beat starts.

#### 6.4.2.3 Int64 CarbonAnalyzerAPI.Interfaces.IAXI4ACETransactionBeat.DataBeat [get], [set]

The particular dataBeat within the transaction.

#### 6.4.2.4 Int64 CarbonAnalyzerAPI.Interfaces.IAXI4ACETransactionBeat.DataHigh [get], [set]

The high 64 bits of data.

#### 6.4.2.5 Int64 CarbonAnalyzerAPI.Interfaces.IAXI4ACETransactionBeat.DataLow [get], [set]

The low 64 bits of data.

#### 6.4.2.6 Int64 CarbonAnalyzerAPI.Interfaces.IAXI4ACETransactionBeat.ID [get]

The unique ID for this transactionBeat.

#### 6.4.2.7 Int64 CarbonAnalyzerAPI.Interfaces.IAXI4ACETransactionBeat.StrobeHigh [get], [set]

The AXI WSTRB signal high.

#### 6.4.2.8 Int64 CarbonAnalyzerAPI.Interfaces.IAXI4ACETransactionBeat.StrobeLow [get], [set]

The AXI WSTRB signal low.

#### 6.4.2.9 Int64 CarbonAnalyzerAPI.Interfaces.IAXI4ACETransactionBeat.TransactionID [get]

The associated transaction with this transactionBeat.

#### 6.4.2.10 Int64 CarbonAnalyzerAPI.Interfaces.IAXI4ACETransactionBeat.UserData [get], [set]

UserData

The documentation for this interface was generated from the following file:

- [IAXI4ACETransactionBeat.cs](#)

## 6.5 CarbonAnalyzerAPI.Interfaces.IAXI4ACETransactionBeats Interface Reference

The interface to the collection of AXI4ACETransactionBeats.

### Public Member Functions

- IEnumerable  
< [IAXI4ACETransactionBeat](#) > [Items](#) ()  
*The collection of AXI4ACETransactionBeats.*
- IEnumerable  
< [IAXI4ACETransactionBeat](#) > [Items](#) ([CycleRange](#) crange)
- [IAXI4ACETransactionBeat](#) [Add](#) (UInt64 dataLow, UInt64 datahigh, UInt64 strobeLow, UInt64 strobeHigh, UInt64 beatStart, UInt64 beatComplete, UInt64 userData)  
*Add a particular AXI4ACE transaction beat.*

### 6.5.1 Detailed Description

The interface to the collection of AXI4ACETransactionBeats.

### 6.5.2 Member Function Documentation

#### 6.5.2.1 IAXI4ACETransactionBeat CarbonAnalyzerAPI.Interfaces.IAXI4ACETransactionBeats.Add ( UInt64 dataLow, UInt64 datahigh, UInt64 strobeLow, UInt64 strobeHigh, UInt64 beatStart, UInt64 beatComplete, UInt64 userData )

Add a particular AXI4ACE transaction beat.

Parameters

<i>dataLow</i>	The low 64 bits of data.
<i>datahigh</i>	The high 64 bits of data.
<i>strobeLow</i>	The AXI WSTRB signal low.
<i>strobeHigh</i>	The AXI WSTRB signal high.
<i>beatStart</i>	The cycle number this beat starts.
<i>beatComplete</i>	The cycle number this beat completes.
<i>userData</i>	user data

Returns

Returns the beat just added.

#### 6.5.2.2 IEnumerable<IAXI4ACETransactionBeat> CarbonAnalyzerAPI.Interfaces.IAXI4ACETransactionBeats.Items ( )

The collection of AXI4ACETransactionBeats.



**Returns**

Returns the items in the collection.

### 6.5.2.3 IEnumerable<IAXI4ACETransactionBeat> CarbonAnalyzerAPI.Interfaces.IAXI4ACETransactionBeats.Items ( CycleRange *crange* )

The documentation for this interface was generated from the following file:

- [IAXI4ACETransactionBeats.cs](#)

## 6.6 CarbonAnalyzerAPI.Interfaces.IAXI4ACETransactions Interface Reference

The interface to the collection of AXI4ACETransactions.

**Public Member Functions**

- IEnumerable< [IAXI4ACETransaction](#) > [Items](#) (CycleRange range)  
*The collection of AXI4ACETransactions to return within a specified range.*
- [IAXI4ACETransaction Add](#) (CarbonEnum.Transaction.Command command, UInt64 address, UInt64 dataWidth, UInt64 dataLength, UInt64 byteEnableLength, UInt64 streamingWidth, UInt64 interConnectID, UInt64 xactionID, UInt64 addressStart, UInt64 addressComplete, UInt64 responseStart, UInt64 responseComplete, UInt64 temporaryID, uint length, CarbonEnum.Transaction.Size axSize, CarbonEnum.Transaction.Burst axBurst, CarbonEnum.Transaction.Lock axLock, CarbonEnum.Transaction.Cache cache, CarbonEnum.Transaction.Protection protection, CarbonEnum.Transaction.Response response, UInt64 qos, UInt64 region, UInt64 userAddress, UInt64 userBitWidth, UInt64 transactionLatency, UInt64 transactionType)  
*Add a new AXI4ACE Transaction.*

**6.6.1 Detailed Description**

The interface to the collection of AXI4ACETransactions.

**6.6.2 Member Function Documentation**

- #### 6.6.2.1 IAXI4ACETransaction CarbonAnalyzerAPI.Interfaces.IAXI4ACETransactions.Add ( CarbonEnum.Transaction.- Command *command*, UInt64 *address*, UInt64 *dataWidth*, UInt64 *dataLength*, UInt64 *byteEnableLength*, UInt64 *streamingWidth*, UInt64 *interConnectID*, UInt64 *xactionID*, UInt64 *addressStart*, UInt64 *addressComplete*, UInt64 *responseStart*, UInt64 *responseComplete*, UInt64 *temporaryID*, uint *length*, CarbonEnum.Transaction.Size *axSize*, CarbonEnum.Transaction.Burst *axBurst*, CarbonEnum.Transaction.Lock *axLock*, CarbonEnum.Transaction.Cache *cache*, CarbonEnum.Transaction.Protection *protection*, CarbonEnum.Transaction.Response *response*, UInt64 *qos*, UInt64 *region*, UInt64 *userAddress*, UInt64 *userBitWidth*, UInt64 *transactionLatency*, UInt64 *transactionType* )

Add a new AXI4ACE Transaction.

**Parameters**

<i>command</i>	The particular read/write or unspecified cmd associated with this transaction.
<i>address</i>	The AXI transactions physical base address.
<i>dataWidth</i>	The width of the transaction data beats in bytes.

<i>dataLength</i>	The total number of bytes in the transaction (TLM2).
<i>byteEnableLength</i>	THE TLM2 byte enable length.
<i>streamingWidth</i>	The TLM2 streaming width.
<i>interConnectID</i>	Internal Connection ID.
<i>xactionID</i>	The AXI transaction ID (AxID).
<i>addressStart</i>	The cycle number for the start of the address phase.
<i>addressComplete</i>	The cycle number for the completion of the address phase.
<i>responseStart</i>	The cycle number for the start of the response phase. (This is only used for writes).
<i>responseComplete</i>	The cycle number for the completion of the response phase. (This is only used for writes).
<i>temporaryID</i>	Temporary id when going from 1 phase to another.
<i>length</i>	The length attributes of the transaction
<i>axSize</i>	The size attributes of the transaction
<i>axBurst</i>	The burst attributes of the transaction
<i>axLock</i>	The lock attributes of the transaction
<i>cache</i>	The cache attributes of the transaction
<i>protection</i>	The protection attributes of the transaction
<i>response</i>	Response value.
<i>qos</i>	Quality of Service, QoS. The QoS identifier sent for each write transaction
<i>region</i>	Region identifier. Permits a single physical interface on a slave to be used for multiple logical interfaces.
<i>userAddress</i>	Please see amba/axi/ace protocol specification.
<i>userBitWidth</i>	Please see amba/axi/ace protocol specification.
<i>transaction-Latency</i>	Please see amba/axi/ace protocol specification.
<i>transactionType</i>	The transaction type. Type CarbonEnum.Transaction.TransactionType. to see a list of valid types.

#### Returns

Returns the AXI4ACETransaction just added.

#### 6.6.2.2 IEnumerable<IAXI4ACETransaction> CarbonAnalyzerAPI.Interfaces.IAXI4ACETransactions.Items ( CycleRange range )

The collection of AXI4ACETransactions to return within a specified range.

#### Parameters

<i>range</i>	The specific range of transactions to return.
--------------	---

#### Returns

Returns the collection of AXI4ACETransactions within the specified range.

The documentation for this interface was generated from the following file:

- [IAXI4ACETransactions.cs](#)

## 6.7 CarbonAnalyzerAPI.Interfaces.IAXI4Transaction Interface Reference

The interface to each AXI4Transaction.

## Properties

- Int64 [ID](#) [get]  
*The ID of this particular transaction.*
- Int64 [TransactionConnectionID](#) [get]  
*The particular connection ID associated with this transaction.*
- CarbonEnum.Transaction.Command [Command](#) [get, set]  
*The particular read/write or unspecified cmd associated with this transaction.*
- Int64 [Address](#) [get, set]  
*The AXI transactions physical base address.*
- Int64 [DataBeats](#) [get, set]  
*The number of data beats in the transaction.*
- Int64 [DataWidth](#) [get, set]  
*The width of the transaction data beats in bytes.*
- Int64 [DataLength](#) [get, set]  
*The total number of bytes in the transaction (TLM2).*
- Int64 [ByteEnableLength](#) [get, set]  
*THE TLM2 byte enable length.*
- Int64 [StreamingWidth](#) [get, set]  
*The TLM2 streaming width.*
- Int64 [InterConnectID](#) [get, set]  
*Internal interconnect id.*
- Int64 [XactionID](#) [get, set]  
*The AXI transaction ID (AxID)*
- Int64 [AddressStart](#) [get, set]  
*The cycle number for the start of the address phase.*
- Int64 [AddressComplete](#) [get, set]  
*The cycle number for the completion of the address phase.*
- Int64 [ResponseStart](#) [get, set]  
*The cycle number for the start of the response phase. (This is only used for writes).*
- Int64 [ResponseComplete](#) [get, set]  
*The cycle number for the completion of the response phase. (This is only used for writes).*
- Int64 [TID](#) [get, set]  
*Temporary id when going from 1 phase to another.*
- Int64 [Length](#) [get, set]  
*The length attributes of the transaction*
- CarbonEnum.Transaction.Size [AxSize](#) [get, set]  
*The size attributes of the transaction*
- CarbonEnum.Transaction.Burst [AxBurst](#) [get, set]  
*The burst attributes of the transaction*
- CarbonEnum.Transaction.Lock [AxLock](#) [get, set]  
*The lock attributes of the transaction*
- [ICache Cache](#) [get]  
*The cache attributes of the transaction*  
*Use the get\* and set\* methods to get and set information about the cache.*
- [IProtection Protection](#) [get]  
*The protection attributes of the transaction*  
*Use the get\* and set\* methods to get and set information about the protection.*
- CarbonEnum.Transaction.Response [Response](#) [get, set]  
*Response value*
- Int64 [QOS](#) [get, set]

- Quality of Service, QoS. The QoS identifier sent for each write transaction*

  - Int64 [Region](#) [get, set]

*Region identifier. Permits a single physical interface on a slave to be used for multiple logical interfaces.*
- Int64 [UserAddress](#) [get, set]

*Please see amba/axi/ace protocol specification.*
- Int64 [UserBitWidth](#) [get, set]

*Please see amba/axi/ace protocol specification.*
- Int64 [UserResponse](#) [get, set]

*Please see amba/axi/ace protocol specification.*
- Int64 [TransactionLatency](#) [get, set]

*Please see amba/axi/ace protocol specification.*
- [IAXI4TransactionBeats TransactionsBeats](#) [get]

*The collection of transactionBeats for this transaction.*

### 6.7.1 Detailed Description

The interface to each AXI4Transaction.

### 6.7.2 Property Documentation

6.7.2.1 Int64 [CarbonAnalyzerAPI.Interfaces.IAXI4Transaction.Address](#) [get], [set]

The AXI transactions physical base address.

6.7.2.2 Int64 [CarbonAnalyzerAPI.Interfaces.IAXI4Transaction.AddressComplete](#) [get], [set]

The cycle number for the completion of the address phase.

6.7.2.3 Int64 [CarbonAnalyzerAPI.Interfaces.IAXI4Transaction.AddressStart](#) [get], [set]

The cycle number for the start of the address phase.

6.7.2.4 [CarbonEnum.Transaction.Burst](#) [CarbonAnalyzerAPI.Interfaces.IAXI4Transaction.AxBurst](#) [get], [set]

The burst attributes of the transaction

6.7.2.5 [CarbonEnum.Transaction.Lock](#) [CarbonAnalyzerAPI.Interfaces.IAXI4Transaction.AxLock](#) [get], [set]

The lock attributes of the transaction

6.7.2.6 [CarbonEnum.Transaction.Size](#) [CarbonAnalyzerAPI.Interfaces.IAXI4Transaction.AxSize](#) [get], [set]

The size attributes of the transaction

6.7.2.7 Int64 [CarbonAnalyzerAPI.Interfaces.IAXI4Transaction.ByteEnableLength](#) [get], [set]

THE TLM2 byte enable length.

**6.7.2.8 ICache CarbonAnalyzerAPI.Interfaces.IAXI4Transaction.Cache** [get]

The cache attributes of the transaction

Use the get\* and set\* methods to get and set information about the cache.

**6.7.2.9 CarbonEnum.Transaction.Command CarbonAnalyzerAPI.Interfaces.IAXI4Transaction.Command** [get], [set]

The particular read/write or unspecified cmd associated with this transaction.

**6.7.2.10 Int64 CarbonAnalyzerAPI.Interfaces.IAXI4Transaction.DataBeats** [get], [set]

The number of data beats in the transaction.

**6.7.2.11 Int64 CarbonAnalyzerAPI.Interfaces.IAXI4Transaction.DataLength** [get], [set]

The total number of bytes in the transaction (TLM2).

**6.7.2.12 Int64 CarbonAnalyzerAPI.Interfaces.IAXI4Transaction.DataWidth** [get], [set]

The width of the transaction data beats in bytes.

**6.7.2.13 Int64 CarbonAnalyzerAPI.Interfaces.IAXI4Transaction.ID** [get]

The ID of this particular transaction.

**6.7.2.14 Int64 CarbonAnalyzerAPI.Interfaces.IAXI4Transaction.InterConnectID** [get], [set]

Internal interconnect id.

**6.7.2.15 Int64 CarbonAnalyzerAPI.Interfaces.IAXI4Transaction.Length** [get], [set]

The length attributes of the transaction

**6.7.2.16 IProtection CarbonAnalyzerAPI.Interfaces.IAXI4Transaction.Protection** [get]

The protection attributes of the transaction

Use the get\* and set\* methods to get and set information about the protection.

**6.7.2.17 Int64 CarbonAnalyzerAPI.Interfaces.IAXI4Transaction.QOS** [get], [set]

Quality of Service, QoS. The QoS identifier sent for each write transaction

**6.7.2.18 Int64 CarbonAnalyzerAPI.Interfaces.IAXI4Transaction.Region** [get], [set]

Region identifier. Permits a single physical interface on a slave to be used for multiple logical interfaces.

**6.7.2.19 CarbonEnum.Transaction.Response CarbonAnalyzerAPI.Interfaces.IAXI4Transaction.Response** [get], [set]

Response value

**6.7.2.20 Int64 CarbonAnalyzerAPI.Interfaces.IAXI4Transaction.ResponseComplete** [get], [set]

The cycle number for the completion of the response phase. (This is only used for writes).

**6.7.2.21 Int64 CarbonAnalyzerAPI.Interfaces.IAXI4Transaction.ResponseStart** [get], [set]

The cycle number for the start of the response phase. (This is only used for writes).

**6.7.2.22 Int64 CarbonAnalyzerAPI.Interfaces.IAXI4Transaction.StreamingWidth** [get], [set]

The TLM2 streaming width.

**6.7.2.23 Int64 CarbonAnalyzerAPI.Interfaces.IAXI4Transaction.TID** [get], [set]

Temporary id when going from 1 phase to another.

**6.7.2.24 Int64 CarbonAnalyzerAPI.Interfaces.IAXI4Transaction.TransactionConnectionID** [get]

The particular connection ID associated with this transaction.

**6.7.2.25 Int64 CarbonAnalyzerAPI.Interfaces.IAXI4Transaction.TransactionLatency** [get], [set]

Please see amba/axi/ace protocol specification.

**6.7.2.26 IAXI4TransactionBeats CarbonAnalyzerAPI.Interfaces.IAXI4Transaction.TransactionsBeats** [get]

The collection of transactionBeats for this transaction.

**6.7.2.27 Int64 CarbonAnalyzerAPI.Interfaces.IAXI4Transaction.UserAddress** [get], [set]

Please see amba/axi/ace protocol specification.

**6.7.2.28 Int64 CarbonAnalyzerAPI.Interfaces.IAXI4Transaction.UserBitWidth** [get], [set]

Please see amba/axi/ace protocol specification.

**6.7.2.29 Int64 CarbonAnalyzerAPI.Interfaces.IAXI4Transaction.UserResponse** [get], [set]

Please see amba/axi/ace protocol specification.

**6.7.2.30 Int64 CarbonAnalyzerAPI.Interfaces.IAXI4Transaction.XactionID** [get], [set]

The AXI transaction ID (AxID)

The documentation for this interface was generated from the following file:

- [IAXI4Transaction.cs](#)

## 6.8 CarbonAnalyzerAPI.Interfaces.IAXI4TransactionBeat Interface Reference

The interface to each AXI4TransactionBeat.

### Properties

- Int64 **ID** [get]  
*The unique ID for this transactionBeat.*
- Int64 **TransactionID** [get]  
*The associated transaction with this transactionBeat.*
- Int64 **DataBeat** [get, set]  
*The particular dataBeat within the transaction.*
- Int64 **DataLow** [get, set]  
*The low 64 bits of data.*
- Int64 **DataHigh** [get, set]  
*The high 64 bits of data.*
- Int64 **StrobeLow** [get, set]  
*The AXI WSTRB signal low.*
- Int64 **StrobeHigh** [get, set]  
*The AXI WSTRB signal high.*
- Int64 **BeatStart** [get, set]  
*The cycle number this beat starts.*
- Int64 **BeatComplete** [get, set]  
*The cycle number this beat completes.*
- Int64 **UserData** [get, set]  
*UserData*

### 6.8.1 Detailed Description

The interface to each AXI4TransactionBeat.

### 6.8.2 Property Documentation

#### 6.8.2.1 Int64 CarbonAnalyzerAPI.Interfaces.IAXI4TransactionBeat.BeatComplete [get], [set]

The cycle number this beat completes.

#### 6.8.2.2 Int64 CarbonAnalyzerAPI.Interfaces.IAXI4TransactionBeat.BeatStart [get], [set]

The cycle number this beat starts.

#### 6.8.2.3 Int64 CarbonAnalyzerAPI.Interfaces.IAXI4TransactionBeat.DataBeat [get], [set]

The particular dataBeat within the transaction.

#### 6.8.2.4 Int64 CarbonAnalyzerAPI.Interfaces.IAXI4TransactionBeat.DataHigh [get], [set]

The high 64 bits of data.

6.8.2.5 Int64 CarbonAnalyzerAPI.Interfaces.IAXI4TransactionBeat.DataLow [get], [set]

The low 64 bits of data.

6.8.2.6 Int64 CarbonAnalyzerAPI.Interfaces.IAXI4TransactionBeat.ID [get]

The unique ID for this transactionBeat.

6.8.2.7 Int64 CarbonAnalyzerAPI.Interfaces.IAXI4TransactionBeat.StrobeHigh [get], [set]

The AXI WSTRB signal high.

6.8.2.8 Int64 CarbonAnalyzerAPI.Interfaces.IAXI4TransactionBeat.StrobeLow [get], [set]

The AXI WSTRB signal low.

6.8.2.9 Int64 CarbonAnalyzerAPI.Interfaces.IAXI4TransactionBeat.TransactionID [get]

The associated transaction with this transactionBeat.

6.8.2.10 Int64 CarbonAnalyzerAPI.Interfaces.IAXI4TransactionBeat.UserData [get], [set]

UserData

The documentation for this interface was generated from the following file:

- [IAXI4TransactionBeat.cs](#)

## 6.9 CarbonAnalyzerAPI.Interfaces.IAXI4TransactionBeats Interface Reference

The interface to the collection of AXI4TransactionBeats.

### Public Member Functions

- IEnumerable< [IAXI4TransactionBeat](#) > Items ()  
*The collection of AXI4TransactionBeats.*
- IEnumerable< [IAXI4TransactionBeat](#) > Items (CycleRange crange)
- [IAXI4TransactionBeat](#) Add (UInt64 dataLow, UInt64 datahigh, UInt64 strobeLow, UInt64 strobeHigh, UInt64 beatStart, UInt64 beatComplete, UInt64 userData)  
*Add a particular AXI4 transaction beat.*

### 6.9.1 Detailed Description

The interface to the collection of AXI4TransactionBeats.

### 6.9.2 Member Function Documentation

6.9.2.1 IAXI4TransactionBeat CarbonAnalyzerAPI.Interfaces.IAXI4TransactionBeats.Add ( UInt64 dataLow, UInt64 datahigh, UInt64 strobeLow, UInt64 strobeHigh, UInt64 beatStart, UInt64 beatComplete, UInt64 userData )

Add a particular AXI4 transaction beat.



## Parameters

<i>dataLow</i>	The low 64 bits of data.
<i>dataHigh</i>	The high 64 bits of data.
<i>strobeLow</i>	The AXI WSTRB signal low.
<i>strobeHigh</i>	The AXI WSTRB signal high.
<i>beatStart</i>	The cycle number this beat starts.
<i>beatComplete</i>	The cycle number this beat completes.
<i>userData</i>	user data

## Returns

Returns the added AXI4TransactionBeat.

### 6.9.2.2 IEnumerable<IAXI4TransactionBeat> CarbonAnalyzerAPI.Interfaces.IAXI4TransactionBeats.Items ( )

The collection of AXI4TransactionBeats.

## Returns

Returns the collection of AXI4TransactionBeats.

### 6.9.2.3 IEnumerable<IAXI4TransactionBeat> CarbonAnalyzerAPI.Interfaces.IAXI4TransactionBeats.Items ( CycleRange crange )

The documentation for this interface was generated from the following file:

- [IAXI4TransactionBeats.cs](#)

## 6.10 CarbonAnalyzerAPI.Interfaces.IAXI4Transactions Interface Reference

The interface to the collection of AXI4Transactions.

### Public Member Functions

- IEnumerable< [IAXI4Transaction](#) > [Items](#) ([CycleRange](#) range)  
*The collection of AXI4Transactions returned for a particular range.*
- [IAXI4Transaction Add](#) (CarbonEnum.Transaction.Command command, UInt64 address, UInt64 dataWidth, UInt64 dataLength, UInt64 byteEnableLength, UInt64 streamingWidth, UInt64 interConnectID, UInt64 xactionID, UInt64 addressStart, UInt64 addressComplete, UInt64 responseStart, UInt64 responseComplete, UInt64 temporaryID, uint length, CarbonEnum.Transaction.Size axSize, CarbonEnum.Transaction.Burst axBurst, CarbonEnum.Transaction.Lock axLock, CarbonEnum.Transaction.Cache cache, CarbonEnum.Transaction.-Protection protection, CarbonEnum.Transaction.Response response, UInt64 qos, UInt64 region, UInt64 userAddress, UInt64 userBitWidth, UInt64 transactionLatency)  
*Add a new AXI4 Transaction.*

### 6.10.1 Detailed Description

The interface to the collection of AXI4Transactions.

## 6.10.2 Member Function Documentation

6.10.2.1 **IAXI4Transaction** CarbonAnalyzerAPI.Interfaces.IAXI4Transactions.Add ( CarbonEnum.Transaction.Command *command*, UInt64 *address*, UInt64 *dataWidth*, UInt64 *dataLength*, UInt64 *byteEnableLength*, UInt64 *streamingWidth*, UInt64 *interConnectID*, UInt64 *xactionID*, UInt64 *addressStart*, UInt64 *addressComplete*, UInt64 *responseStart*, UInt64 *responseComplete*, UInt64 *temporaryID*, uint *length*, CarbonEnum.Transaction.Size *axSize*, CarbonEnum.Transaction.Burst *axBurst*, CarbonEnum.Transaction.Lock *axLock*, CarbonEnum.Transaction.Cache *cache*, CarbonEnum.Transaction.Protection *protection*, CarbonEnum.Transaction.Response *response*, UInt64 *qos*, UInt64 *region*, UInt64 *userAddress*, UInt64 *userBitWidth*, UInt64 *transactionLatency* )

Add a new AXI4 Transaction.

## Parameters

<i>command</i>	The particular read/write or unspecified cmd associated with this transaction.
<i>address</i>	The AXI transactions physical base address.
<i>dataWidth</i>	The width of the transaction data beats in bytes.
<i>dataLength</i>	The total number of bytes in the transaction (TLM2).
<i>byteEnable- Length</i>	THE TLM2 byte enable length.
<i>streamingWidth</i>	The TLM2 streaming width.
<i>interConnectID</i>	Internal connection ID.
<i>xactionID</i>	The AXI transaction ID (AxID).
<i>addressStart</i>	The cycle number for the start of the address phase.
<i>address- Complete</i>	The cycle number for the completion of the address phase.
<i>responseStart</i>	The cycle number for the start of the response phase. (This is only used for writes).
<i>response- Complete</i>	The cycle number for the completion of the response phase. (This is only used for writes).
<i>temporaryID</i>	Temporary id when going from 1 phase to another.
<i>length</i>	The length attributes of the transaction
<i>axSize</i>	The size attributes of the transaction
<i>axBurst</i>	The burst attributes of the transaction
<i>axLock</i>	The lock attributes of the transaction
<i>cache</i>	The cache attributes of the transaction
<i>protection</i>	The protection attributes of the transaction
<i>response</i>	Response value.
<i>qos</i>	Quality of Service, QoS. The QoS identifier sent for each write transaction
<i>region</i>	Region identifier. Permits a single physical interface on a slave to be used for multiple logical interfaces.
<i>userAddress</i>	Please see amba/axi/ace protocol specification.
<i>userBitWidth</i>	Please see amba/axi/ace protocol specification.
<i>transaction- Latency</i>	Please see amba/axi/ace protocol specification.

## Returns

Returns the newly added AXI4Transaction.

## 6.10.2.2 IEnumerable&lt;IAXI4Transaction&gt; CarbonAnalyzerAPI.Interfaces.IAXI4Transactions.Items ( CycleRange range )

The collection of AXI4Transctions returned for a particular range.

## Parameters

<i>range</i>	The range of AXI4Transactions to return.
--------------	--

## Returns

Returns the collection of AXI4Transactions within the specified range.

The documentation for this interface was generated from the following file:

- [IAXI4Transactions.cs](#)

## 6.11 CarbonAnalyzerAPI.Interfaces.IAXIv2Transaction Interface Reference

The interface to each AXIv2Transaction.

## Properties

- Int64 [ID](#) [get]  
*The ID of this particular transaction.*
- Int64 [TransactionConnectionID](#) [get]  
*The particular connection ID associated with this transaction.*
- CarbonEnum.Transaction.Command [Command](#) [get, set]  
*The particular read/write or unspecified cmd associated with this transaction.*
- Int64 [Address](#) [get, set]  
*The AXI transactions physical base address.*
- Int64 [DataBeats](#) [get, set]  
*The number of data beats in the transaction.*
- Int64 [DataWidth](#) [get, set]  
*The width of the transaction data beats in bytes.*
- Int64 [DataLength](#) [get, set]  
*The total number of bytes in the transaction (TLM2).*
- Int64 [ByteEnableLength](#) [get, set]  
*THE TLM2 byte enable length.*
- Int64 [StreamingWidth](#) [get, set]  
*The TLM2 streaming width.*
- Int64 [InterConnectID](#) [get, set]  
*Internal interconnect id.*
- Int64 [XactionID](#) [get, set]  
*The AXI transaction ID (AxID)*
- Int64 [AddressStart](#) [get, set]  
*The cycle number for the start of the address phase.*
- Int64 [AddressComplete](#) [get, set]  
*The cycle number for the completion of the address phase.*
- Int64 [ResponseStart](#) [get, set]  
*The cycle number for the start of the response phase. (This is only used for writes).*
- Int64 [ResponseComplete](#) [get, set]  
*The cycle number for the completion of the response phase. (This is only used for writes).*
- Int64 [TID](#) [get, set]  
*Temporary id when going from 1 phase to another.*
- int [AxLen](#) [get, set]  
*The length attributes of the transaction*
- CarbonEnum.Transaction.Size [AxSize](#) [get, set]  
*The size attributes of the transaction*
- CarbonEnum.Transaction.Burst [AxBurst](#) [get, set]  
*The burst attributes of the transaction*
- CarbonEnum.Transaction.Lock [AxLock](#) [get, set]  
*The lock attributes of the transaction*
- [ICache Cache](#) [get]  
*The cache attributes of the transaction*  
*Use the get\* and set\* methods to get and set information about the cache.*
- [IProtection Protection](#) [get]  
*The protection attributes of the transaction*  
*Use the get\* and set\* methods to get and set information about the protection.*
- CarbonEnum.Transaction.Response [Response](#) [get, set]  
*Response value*
- [IAXIv2TransactionBeats TransactionsBeats](#) [get]  
*The collection of transactionBeats for this transaction.*

### 6.11.1 Detailed Description

The interface to each AXIv2Transaction.

### 6.11.2 Property Documentation

**6.11.2.1 Int64 CarbonAnalyzerAPI.Interfaces.IAXIv2Transaction.Address** [get], [set]

The AXI transactions physical base address.

**6.11.2.2 Int64 CarbonAnalyzerAPI.Interfaces.IAXIv2Transaction.AddressComplete** [get], [set]

The cycle number for the completion of the address phase.

**6.11.2.3 Int64 CarbonAnalyzerAPI.Interfaces.IAXIv2Transaction.AddressStart** [get], [set]

The cycle number for the start of the address phase.

**6.11.2.4 CarbonEnum.Transaction.Burst CarbonAnalyzerAPI.Interfaces.IAXIv2Transaction.AxBurst** [get], [set]

The burst attributes of the transaction

**6.11.2.5 int CarbonAnalyzerAPI.Interfaces.IAXIv2Transaction.AxLen** [get], [set]

The length attributes of the transaction

**6.11.2.6 CarbonEnum.Transaction.Lock CarbonAnalyzerAPI.Interfaces.IAXIv2Transaction.AxLock** [get], [set]

The lock attributes of the transaction

**6.11.2.7 CarbonEnum.Transaction.Size CarbonAnalyzerAPI.Interfaces.IAXIv2Transaction.AxSize** [get], [set]

The size attributes of the transaction

**6.11.2.8 Int64 CarbonAnalyzerAPI.Interfaces.IAXIv2Transaction.ByteEnableLength** [get], [set]

THE TLM2 byte enable length.

**6.11.2.9 ICache CarbonAnalyzerAPI.Interfaces.IAXIv2Transaction.Cache** [get]

The cache attributes of the transaction

Use the get\* and set\* methods to get and set information about the cache.

**6.11.2.10 CarbonEnum.Transaction.Command CarbonAnalyzerAPI.Interfaces.IAXIv2Transaction.Command** [get], [set]

The particular read/write or unspecified cmd associated with this transaction.

**6.11.2.11 Int64 CarbonAnalyzerAPI.Interfaces.IAXIv2Transaction.DataBeats** [get], [set]

The number of data beats in the transaction.

**6.11.2.12 Int64 CarbonAnalyzerAPI.Interfaces.IAXIv2Transaction.DataLength** [get], [set]

The total number of bytes in the transaction (TLM2).

**6.11.2.13 Int64 CarbonAnalyzerAPI.Interfaces.IAXIv2Transaction.DataWidth** [get], [set]

The width of the transaction data beats in bytes.

**6.11.2.14 Int64 CarbonAnalyzerAPI.Interfaces.IAXIv2Transaction.ID** [get]

The ID of this particular transaction.

**6.11.2.15 Int64 CarbonAnalyzerAPI.Interfaces.IAXIv2Transaction.InterConnectID** [get], [set]

Internal interconnect id.

**6.11.2.16 IPProtection CarbonAnalyzerAPI.Interfaces.IAXIv2Transaction.Protection** [get]

The protection attributes of the transaction

Use the get\* and set\* methods to get and set information about the protection.

**6.11.2.17 CarbonEnum.Transaction.Response CarbonAnalyzerAPI.Interfaces.IAXIv2Transaction.Response** [get], [set]

Response value

**6.11.2.18 Int64 CarbonAnalyzerAPI.Interfaces.IAXIv2Transaction.ResponseComplete** [get], [set]

The cycle number for the completion of the response phase. (This is only used for writes).

**6.11.2.19 Int64 CarbonAnalyzerAPI.Interfaces.IAXIv2Transaction.ResponseStart** [get], [set]

The cycle number for the start of the response phase. (This is only used for writes).

**6.11.2.20 Int64 CarbonAnalyzerAPI.Interfaces.IAXIv2Transaction.StreamingWidth** [get], [set]

The TLM2 streaming width.

**6.11.2.21 Int64 CarbonAnalyzerAPI.Interfaces.IAXIv2Transaction.TID** [get], [set]

Temporary id when going from 1 phase to another.

**6.11.2.22 Int64 CarbonAnalyzerAPI.Interfaces.IAXIv2Transaction.TransactionConnectionID** [get]

The particular connection ID associated with this transaction.

### 6.11.2.23 IAXIv2TransactionBeats CarbonAnalyzerAPI.Interfaces.IAXIv2Transaction.TransactionsBeats [get]

The collection of transactionBeats for this transaction.

### 6.11.2.24 Int64 CarbonAnalyzerAPI.Interfaces.IAXIv2Transaction.XactionID [get], [set]

The AXI transaction ID (AxID)

The documentation for this interface was generated from the following file:

- [IAXIv2Transaction.cs](#)

## 6.12 CarbonAnalyzerAPI.Interfaces.IAXIv2TransactionBeat Interface Reference

The interface to each AXIv2TransactionBeat.

### Properties

- Int64 [ID](#) [get]  
*The unique ID for this transactionBeat.*
- Int64 [TransactionID](#) [get]  
*The associated transaction with this transactionBeat.*
- Int64 [DataBeat](#) [get, set]  
*The particular dataBeat within the transaction.*
- Int64 [DataLow](#) [get, set]  
*The low 64 bits of data.*
- Int64 [DataHigh](#) [get, set]  
*The high 64 bits of data.*
- Int64 [StrobeLow](#) [get, set]  
*The AXI WSTRB signal low.*
- Int64 [StrobeHigh](#) [get, set]  
*The AXI WSTRB signal high.*
- Int64 [BeatStart](#) [get, set]  
*The cycle number this beat starts.*
- Int64 [BeatComplete](#) [get, set]  
*The cycle number this beat completes.*

### 6.12.1 Detailed Description

The interface to each AXIv2TransactionBeat.

### 6.12.2 Property Documentation

#### 6.12.2.1 Int64 CarbonAnalyzerAPI.Interfaces.IAXIv2TransactionBeat.BeatComplete [get], [set]

The cycle number this beat completes.

#### 6.12.2.2 Int64 CarbonAnalyzerAPI.Interfaces.IAXIv2TransactionBeat.BeatStart [get], [set]

The cycle number this beat starts.

6.12.2.3 Int64 CarbonAnalyzerAPI.Interfaces.IAXlv2TransactionBeat.DataBeat [get], [set]

The particular dataBeat within the transaction.

6.12.2.4 Int64 CarbonAnalyzerAPI.Interfaces.IAXlv2TransactionBeat.DataHigh [get], [set]

The high 64 bits of data.

6.12.2.5 Int64 CarbonAnalyzerAPI.Interfaces.IAXlv2TransactionBeat.DataLow [get], [set]

The low 64 bits of data.

6.12.2.6 Int64 CarbonAnalyzerAPI.Interfaces.IAXlv2TransactionBeat.ID [get]

The unique ID for this transactionBeat.

6.12.2.7 Int64 CarbonAnalyzerAPI.Interfaces.IAXlv2TransactionBeat.StrobeHigh [get], [set]

The AXI WSTRB signal high.

6.12.2.8 Int64 CarbonAnalyzerAPI.Interfaces.IAXlv2TransactionBeat.StrobeLow [get], [set]

The AXI WSTRB signal low.

6.12.2.9 Int64 CarbonAnalyzerAPI.Interfaces.IAXlv2TransactionBeat.TransactionID [get]

The associated transaction with this transactionBeat.

The documentation for this interface was generated from the following file:

- [IAXlv2TransactionBeat.cs](#)

## 6.13 CarbonAnalyzerAPI.Interfaces.IAXlv2TransactionBeats Interface Reference

The interface to the collection of AXlv2TransactionBeats.

### Public Member Functions

- IEnumerable  
 < [IAXlv2TransactionBeat](#) > [Items](#) ()  
*The collection of AXlv2TransactionBeats*
- IEnumerable  
 < [IAXlv2TransactionBeat](#) > [Items](#) (CycleRange crange)
- [IAXlv2TransactionBeat Add](#) (UInt64 dataLow, UInt64 datahigh, UInt64 strobeLow, UInt64 strobeHigh, UInt64 beatStart, UInt64 beatComplete)  
*Add a particular AXlv2 transaction beat.*

### 6.13.1 Detailed Description

The interface to the collection of AXlv2TransactionBeats.



### 6.13.2 Member Function Documentation

#### 6.13.2.1 IAXlv2TransactionBeat CarbonAnalyzerAPI.Interfaces.IAXlv2TransactionBeats.Add ( UInt64 dataLow, UInt64 datahigh, UInt64 strobeLow, UInt64 strobeHigh, UInt64 beatStart, UInt64 beatComplete )

Add a particular AXlv2 transaction beat.

Parameters

<i>dataLow</i>	The low 64 bits of data.
<i>datahigh</i>	The high 64 bits of data.
<i>strobeLow</i>	The AXI WSTRB signal low.
<i>strobeHigh</i>	The AXI WSTRB signal high.
<i>beatStart</i>	The cycle number this beat starts.
<i>beatComplete</i>	The cycle number this beat completes.

Returns

Returns the newly added AXlv2TransactionBeat.

#### 6.13.2.2 IEnumerable<IAXlv2TransactionBeat> CarbonAnalyzerAPI.Interfaces.IAXlv2TransactionBeats.Items ( )

The collection of AXlv2TransactionBeats

Returns

Returns the collection of AXlv2TransactionBeats.

#### 6.13.2.3 IEnumerable<IAXlv2TransactionBeat> CarbonAnalyzerAPI.Interfaces.IAXlv2TransactionBeats.Items ( CycleRange crange )

The documentation for this interface was generated from the following file:

- [IAXlv2TransactionBeats.cs](#)

## 6.14 CarbonAnalyzerAPI.Interfaces.IAXlv2Transactions Interface Reference

The interface to the collection of AXlv2Transactions.

### Public Member Functions

- [IEnumerable< IAXlv2Transaction > Items \(CycleRange range\)](#)  
*Returns the collection of AXlv2Transactions within the specified range.*
- [IAXlv2Transaction Add](#) (CarbonEnum.Transaction.Command command, UInt64 address, UInt64 dataWidth, UInt64 dataLength, UInt64 byteEnableLength, UInt64 streamingWidth, UInt64 interConnectID, UInt64 xactionID, UInt64 addressStart, UInt64 addressComplete, UInt64 responseStart, UInt64 responseComplete, UInt64 temporaryID, uint length, CarbonEnum.Transaction.Size axSize, CarbonEnum.Transaction.Burst axBurst, CarbonEnum.Transaction.Lock axLock, CarbonEnum.Transaction.Cache cache, CarbonEnum.Transaction.Protection protection, CarbonEnum.Transaction.Response response)  
*Add an AXlv2 Transaction.*

### 6.14.1 Detailed Description

The interface to the collection of AXlv2Transactions.

## 6.14.2 Member Function Documentation

6.14.2.1 **IAxlv2Transaction** CarbonAnalyzerAPI.Interfaces.IAxlv2Transactions.Add ( CarbonEnum.Transaction.Command *command*, UInt64 *address*, UInt64 *dataWidth*, UInt64 *dataLength*, UInt64 *byteEnableLength*, UInt64 *streamingWidth*, UInt64 *interConnectID*, UInt64 *xactionID*, UInt64 *addressStart*, UInt64 *addressComplete*, UInt64 *responseStart*, UInt64 *responseComplete*, UInt64 *temporaryID*, uint *length*, CarbonEnum.Transaction.Size *axSize*, CarbonEnum.Transaction.Burst *axBurst*, CarbonEnum.Transaction.Lock *axLock*, CarbonEnum.Transaction.Cache *cache*, CarbonEnum.Transaction.Protection *protection*, CarbonEnum.Transaction.Response *response* )

Add an AXIv2 Transaction.

### Parameters

<i>command</i>	The particular read/write or unspecified cmd associated with this transaction.
<i>address</i>	The AXI transactions physical base address.
<i>dataWidth</i>	The width of the transaction data beats in bytes.
<i>dataLength</i>	The total number of bytes in the transaction (TLM2).
<i>byteEnableLength</i>	THE TLM2 byte enable length.
<i>streamingWidth</i>	The TLM2 streaming width.
<i>interConnectID</i>	internal interconnect id
<i>xactionID</i>	The AXI transaction ID (AxID).
<i>addressStart</i>	The cycle number for the start of the address phase.
<i>addressComplete</i>	The cycle number for the completion of the address phase.
<i>responseStart</i>	The cycle number for the start of the response phase. (This is only used for writes).
<i>responseComplete</i>	The cycle number for the completion of the response phase. (This is only used for writes).
<i>temporaryID</i>	Temporary id when going from 1 phase to another.
<i>length</i>	The length attributes of the transaction
<i>axSize</i>	The size attributes of the transaction
<i>axBurst</i>	The burst attributes of the transaction
<i>axLock</i>	The lock attributes of the transaction
<i>cache</i>	The cache attributes of the transaction
<i>protection</i>	The protection attributes of the transaction
<i>response</i>	Response value.

### Returns

Returns the newly added AXIv2Transaction.

6.14.2.2 **IEnumerable<IAxlv2Transaction>** CarbonAnalyzerAPI.Interfaces.IAxlv2Transactions.Items ( **CycleRange** *range* )

Returns the collection of AXIv2Transactions within the specified range.

### Parameters

<i>range</i>	The specific range of AXIv2 transactions to return.
--------------	---

### Returns

Returns the collection of AXIv2Transactions within the specified range.

The documentation for this interface was generated from the following file:

- [IAxlv2Transactions.cs](#)

## 6.15 CarbonAnalyzerAPI.Interfaces.ICache Interface Reference

This interface applies to transactions and can be used to find out if the transaction is bufferable, cacheable, or whether write or read allocation is mandatory.

### Properties

- bool [Bufferable](#) [get, set]  
*When this bit is asserted, the interconnect, or any component, can delay the transaction reaching its final destination for any number of cycles*
- bool [Cacheable](#) [get, set]  
*When this bit is deasserted, allocation of the transaction is forbidden.*
- bool [ReadAlloc](#) [get, set]  
*When this bit is asserted, read allocation of the transaction is recommended but is not mandatory. The RA bit must not be asserted if the C bit is deasserted.*
- bool [WriteAlloc](#) [get, set]  
*When this bit is asserted, write allocation of the transaction is recommended but is not mandatory. The WA bit must not be asserted if the C bit is deasserted.*

### 6.15.1 Detailed Description

This interface applies to transactions and can be used to find out if the transaction is bufferable, cacheable, or whether write or read allocation is mandatory.

### 6.15.2 Property Documentation

#### 6.15.2.1 bool CarbonAnalyzerAPI.Interfaces.ICache.Bufferable [get], [set]

When this bit is asserted, the interconnect, or any component, can delay the transaction reaching its final destination for any number of cycles

#### 6.15.2.2 bool CarbonAnalyzerAPI.Interfaces.ICache.Cacheable [get], [set]

When this bit is deasserted, allocation of the transaction is forbidden.

#### 6.15.2.3 bool CarbonAnalyzerAPI.Interfaces.ICache.ReadAlloc [get], [set]

When this bit is asserted, read allocation of the transaction is recommended but is not mandatory. The RA bit must not be asserted if the C bit is deasserted.

#### 6.15.2.4 bool CarbonAnalyzerAPI.Interfaces.ICache.WriteAlloc [get], [set]

When this bit is asserted, write allocation of the transaction is recommended but is not mandatory. The WA bit must not be asserted if the C bit is deasserted.

The documentation for this interface was generated from the following file:

- [ICache.cs](#)

## 6.16 CarbonAnalyzerAPI.Interfaces.ICapiDataCorrelatedValue Interface Reference

The interface to event data for each cycle.

## Properties

- Int64 [CycleNumber](#) [get, set]  
*The cycle number associated with the event.*
- Int64 [Value1](#) [get, set]  
*The first correlated value.*
- Int64 [Value2](#) [get, set]  
*The second correlated value.*

### 6.16.1 Detailed Description

The interface to event data for each cycle.

### 6.16.2 Property Documentation

#### 6.16.2.1 Int64 CarbonAnalyzerAPI.Interfaces.ICapiDataCorrelatedValue.CycleNumber [get], [set]

The cycle number associated with the event.

#### 6.16.2.2 Int64 CarbonAnalyzerAPI.Interfaces.ICapiDataCorrelatedValue.Value1 [get], [set]

The first correlated value.

#### 6.16.2.3 Int64 CarbonAnalyzerAPI.Interfaces.ICapiDataCorrelatedValue.Value2 [get], [set]

The second correlated value.

The documentation for this interface was generated from the following file:

- [ICapiDataCorrelatedValue.cs](#)

## 6.17 CarbonAnalyzerAPI.Interfaces.ICapiDataCorrelatedValues Interface Reference

The interface to the collection of CapiDataCorrelatedValues.

### Public Member Functions

- IEnumerable  
< [ICapiDataCorrelatedValue](#) > [Values](#) ([CycleRange](#) range)  
*return the Values from a specified range.*

### 6.17.1 Detailed Description

The interface to the collection of CapiDataCorrelatedValues.

### 6.17.2 Member Function Documentation

#### 6.17.2.1 IEnumerable<ICapiDataCorrelatedValue> CarbonAnalyzerAPI.Interfaces.ICapiDataCorrelatedValues.Values ( [CycleRange](#) range )

return the Values from a specified range.

## Parameters

<i>range</i>	The particular range. e.g. <a href="#">CycleRange.All</a>
--------------	---

## Returns

Returns the Values from a specified range.

The documentation for this interface was generated from the following file:

- [ICapiDataCorrelatedValues.cs](#)

## 6.18 CarbonAnalyzerAPI.Interfaces.ICapiDataNumericValue Interface Reference

The interface to event data for each cycle.

## Properties

- Int64 [CycleNumber](#) [get, set]  
*The cycle number associated with the event.*
- Int64 [Value](#) [get, set]  
*The value at this cycle number.*

### 6.18.1 Detailed Description

The interface to event data for each cycle.

### 6.18.2 Property Documentation

#### 6.18.2.1 Int64 CarbonAnalyzerAPI.Interfaces.ICapiDataNumericValue.CycleNumber [get], [set]

The cycle number associated with the event.

#### 6.18.2.2 Int64 CarbonAnalyzerAPI.Interfaces.ICapiDataNumericValue.Value [get], [set]

The value at this cycle number.

The documentation for this interface was generated from the following file:

- [ICapiDataNumericValue.cs](#)

## 6.19 CarbonAnalyzerAPI.Interfaces.ICapiDataNumericValues Interface Reference

The interface to the collection of CapiDataNumericValues.

## Public Member Functions

- IEnumerable  
< [ICapiDataNumericValue](#) > [Values](#) ([CycleRange](#) range)  
*return the Values from a specified range.*

### 6.19.1 Detailed Description

The interface to the collection of CapiDataNumericValues.

### 6.19.2 Member Function Documentation

#### 6.19.2.1 IEnumerable<ICapiDataNumericValue> CarbonAnalyzerAPI.Interfaces.ICapiDataNumericValues.Values ( CycleRange range )

return the Values from a specified range.

##### Parameters

<i>range</i>	The particular range. e.g. <a href="#">CycleRange.All</a>
--------------	---

##### Returns

Returns the Values from a specified range.

The documentation for this interface was generated from the following file:

- [ICapiDataNumericValues.cs](#)

## 6.20 CarbonAnalyzerAPI.Interfaces.ICapiDataSymbolValue Interface Reference

The interface to assess the number of times particular event values occur. Applies only on channels that are of type symbol.

### Properties

- Int64 [CycleNumber](#) [get, set]  
*The cycle number that an event occurs*
- Int64 [Value](#) [get, set]  
*The value at the number.*
- Int64 [Count](#) [get, set]  
*The number of times this value occurs at this cycle number.*

### 6.20.1 Detailed Description

The interface to assess the number of times particular event values occur. Applies only on channels that are of type symbol.

### 6.20.2 Property Documentation

#### 6.20.2.1 Int64 CarbonAnalyzerAPI.Interfaces.ICapiDataSymbolValue.Count [get], [set]

The number of times this value occurs at this cycle number.

#### 6.20.2.2 Int64 CarbonAnalyzerAPI.Interfaces.ICapiDataSymbolValue.CycleNumber [get], [set]

The cycle number that an event occurs

## 6.20.2.3 Int64 CarbonAnalyzerAPI.Interfaces.ICapiDataSymbolValue.Value [get], [set]

The value at the number.

The documentation for this interface was generated from the following file:

- [ICapiDataSymbolValue.cs](#)

## 6.21 CarbonAnalyzerAPI.Interfaces.ICapiDataSymbolValues Interface Reference

The interface to the collection of CapiDataSymbolValues.

### Public Member Functions

- [IEnumerable< ICapiDataSymbolValue > Values](#) (CapiResolution resolution, [CycleRange](#) range)  
*A method to get [ICapiDataSymbolValues](#) from a channel.*

### 6.21.1 Detailed Description

The interface to the collection of CapiDataSymbolValues.

### 6.21.2 Member Function Documentation

#### 6.21.2.1 [IEnumerable<ICapiDataSymbolValue> CarbonAnalyzerAPI.Interfaces.ICapiDataSymbolValues.Values](#) ( [CapiResolution](#) resolution, [CycleRange](#) range )

A method to get [ICapiDataSymbolValues](#) from a channel.

Parameters

<i>resolution</i>	The resolution. e.g. <a href="#">CapiResolution.ResolutionValues.Cycle10</a>
<i>range</i>	The range. e.g. <a href="#">CycleRange.All</a>

Returns

Returns the [CapiDataSymbolValues](#) from a specified resolution and range

The documentation for this interface was generated from the following file:

- [ICapiDataSymbolValues.cs](#)

## 6.22 CarbonAnalyzerAPI.Interfaces.ICapiStream Interface Reference

The interface to each capi stream.

### Public Member Functions

- [ICapiStreamChannel AddChannel](#) (string channelName, [CarbonEnum.Capi.ChannelType](#) channelType, string channelDescription)  
*Add a channel to this stream. Note that numeric channels must be added before symbolic channels.*
- [ICapiDataCorrelatedValues CorrelatedValues](#) ([ICapiStreamChannel](#) channel1, [ICapiStreamChannel](#) channel2)  
*The collection of symbolic values associated with this channel.*

## Properties

- string [Name](#) [get, set]  
The stream name. e.g. CPU0\_ICache
- Int64 [ID](#) [get]  
The internal ID of this stream.
- string [Label](#) [get, set]  
Another way to identify the stream. Usually, the same as the name.
- string [Description](#) [get, set]  
A verbose description of the stream.
- string [SourceInstance](#) [get, set]  
The instance associated with this stream. e.g. A9-MP1-PL301.CortexA9MP
- [ICapiStreamChannels Channels](#) [get]  
The collection of channels associated with this stream.
- [ISimulationWindows SimulationWindows](#) [get]  
The collection of simulation windows associated with this stream.
- UInt64 [TotalWindowCycles](#) [get]  
The total cycles this stream is active.

### 6.22.1 Detailed Description

The interface to each capi stream.

### 6.22.2 Member Function Documentation

#### 6.22.2.1 [ICapiStreamChannel](#) `CarbonAnalyzerAPI.Interfaces.ICapiStream.AddChannel ( string channelName, CarbonEnum.Capi.ChannelType channelType, string channelDescription )`

Add a channel to this stream. Note that numeric channels must be added before symbolic channels.

##### Parameters

<i>channelName</i>	The channel name. e.g. CPU0_ICache
<i>channelType</i>	The type of Channel. Type CarbonEnum.Capi.ChannelType. to get a complete list of types
<i>channel-Description</i>	A description of the channe to be added.

##### Returns

Returns the newly added CapiStreamChannel.

#### 6.22.2.2 [ICapiDataCorrelatedValues](#) `CarbonAnalyzerAPI.Interfaces.ICapiStream.CorrelatedValues ( ICapiStreamChannel channel1, ICapiStreamChannel channel2 )`

The collection of symbolic values associated with this channel.

### 6.22.3 Property Documentation

#### 6.22.3.1 [ICapiStreamChannels](#) `CarbonAnalyzerAPI.Interfaces.ICapiStream.Channels` [get]

The collection of channels associated with this stream.



6.22.3.2 string CarbonAnalyzerAPI.Interfaces.ICapiStream.Description [get], [set]

A verbose description of the stream.

6.22.3.3 Int64 CarbonAnalyzerAPI.Interfaces.ICapiStream.ID [get]

The internal ID of this stream.

6.22.3.4 string CarbonAnalyzerAPI.Interfaces.ICapiStream.Label [get], [set]

Another way to identify the stream. Usually, the same as the name.

6.22.3.5 string CarbonAnalyzerAPI.Interfaces.ICapiStream.Name [get], [set]

The stream name. e.g. CPU0\_ICache

6.22.3.6 ISimulationWindows CarbonAnalyzerAPI.Interfaces.ICapiStream.SimulationWindows [get]

The collection of simulation windows associated with this stream.

6.22.3.7 string CarbonAnalyzerAPI.Interfaces.ICapiStream.SourceInstance [get], [set]

The instance associated with this stream. e.g. A9-MP1-PL301.CortexA9MP

6.22.3.8 UInt64 CarbonAnalyzerAPI.Interfaces.ICapiStream.TotalWindowCycles [get]

The total cycles this stream is active.

The documentation for this interface was generated from the following file:

- [ICapiStream.cs](#)

## 6.23 CarbonAnalyzerAPI.Interfaces.ICapiStreamChannel Interface Reference

The interface to each CapiStreamChannel.

### Public Member Functions

- [ICapiStreamChannelSymbol AddSymbol](#) (string channelSymbolName, long channelSymbolValue)  
*Add a symbol to this channel.*
- void [AddValue](#) (Int64 cycleNumber, Int64 Value)  
*Add either a numeric or symbol value (depending on the DataType to this channel.*
- void [FlushValues](#) ()  
*Applies to the write interface and only applies when writing [ICapiDataSymbolValues](#) to the database. This should be called after adding all [ICapiDataSymbolValues](#) to ensure that they are all committed.*

## Properties

- string [Name](#) [get, set]  
The name of this channel.
- Int64 [ID](#) [get]  
The internal ID associated with this channel.
- string [Type](#) [get, set]  
The type of this channel. Type `CarbonEnum.Capi.ChannelType`. to see a list of available types. e.g. `CarbonEnum.Capi.ChannelType.TYPE_SYMBOL`
- string [Description](#) [get, set]  
A description of this channel.
- Int64 [Events](#) [get, set]  
The number of events occurring on this channel.
- [ChannelTypes DataType](#) [get, set]  
Whether activity on this channel is numeric or symbolic e.g. `ChannelTypes.Numeric` or `ChannelTypes.Symbolic`
- [ICapiStreamChannelSymbols Symbols](#) [get]  
The collection of [ICapiStreamChannelSymbols](#) associated with this channel.
- [ICapiDataNumericValues NumericValues](#) [get]  
The collection of numeric values associated with this channel.
- [ICapiDataSymbolValues SymbolValues](#) [get]  
The collection of symbolic values associated with this channel.
- Int64 [MinEventCycle](#) [get]  
Minimum cycle on this channel that event occurs.
- Int64 [MaxEventCycle](#) [get]  
Maximum cycle on this channel that event occurs.

### 6.23.1 Detailed Description

The interface to each `CapiStreamChannel`.

### 6.23.2 Member Function Documentation

#### 6.23.2.1 `ICapiStreamChannelSymbol CarbonAnalyzerAPI.Interfaces.ICapiStreamChannel.AddSymbol ( string channelSymbolName, long channelSymbolValue )`

Add a symbol to this channel.

##### Parameters

<i>channelSymbol-Name</i>	The symbol name. e.g. Cache Miss (0x03)
<i>channelSymbol-Value</i>	A value associated with this particular <a href="#">ICapiStreamChannelSymbol</a>

##### Returns

Returns the newly added `CapiStreamChannelSymbol`.

#### 6.23.2.2 `void CarbonAnalyzerAPI.Interfaces.ICapiStreamChannel.AddValue ( Int64 cycleNumber, Int64 Value )`

Add either a numeric or symbol value (depending on the `DataType` to this channel.

## Parameters

<i>cycleNumber</i>	The cycle number that the value is to be added for.
<i>Value</i>	The value to be added at the indicated cycle number.

## 6.23.2.3 void CarbonAnalyzerAPI.Interfaces.ICapiStreamChannel.FlushValues ( )

Applies to the write interface and only applies when writing [ICapiDataSymbolValues](#) to the database. This should be called after adding all [ICapiDataSymbolValues](#) to ensure that they are all committed.

## 6.23.3 Property Documentation

## 6.23.3.1 ChannelTypes CarbonAnalyzerAPI.Interfaces.ICapiStreamChannel.DataType [get], [set]

Whether activity on this channel is numeric or symbolic e.g. ChannelTypes.Numeric or ChannelTypes.Symbolic

## 6.23.3.2 string CarbonAnalyzerAPI.Interfaces.ICapiStreamChannel.Description [get], [set]

A description of this channel.

## 6.23.3.3 Int64 CarbonAnalyzerAPI.Interfaces.ICapiStreamChannel.Events [get], [set]

The number of events occurring on this channel.

## 6.23.3.4 Int64 CarbonAnalyzerAPI.Interfaces.ICapiStreamChannel.ID [get]

The internal ID associated with this channel.

## 6.23.3.5 Int64 CarbonAnalyzerAPI.Interfaces.ICapiStreamChannel.MaxEventCycle [get]

Maximum cycle on this channel that event occurs.

## Returns

Maximum event cycle

## 6.23.3.6 Int64 CarbonAnalyzerAPI.Interfaces.ICapiStreamChannel.MinEventCycle [get]

Minimum cycle on this channel that event occurs.

## Returns

Minimum event cycle

## 6.23.3.7 string CarbonAnalyzerAPI.Interfaces.ICapiStreamChannel.Name [get], [set]

The name of this channel.

## 6.23.3.8 ICapiDataNumericValues CarbonAnalyzerAPI.Interfaces.ICapiStreamChannel.NumericValues [get]

The collection of numeric values associated with this channel.

#### 6.23.3.9 ICapiStreamChannelSymbols CarbonAnalyzerAPI.Interfaces.ICapiStreamChannel.Symbols [get]

The collection of [ICapiStreamChannelSymbols](#) associated with this channel.

#### 6.23.3.10 ICapiDataSymbolValues CarbonAnalyzerAPI.Interfaces.ICapiStreamChannel.SymbolValues [get]

The collection of symbolic values associated with this channel.

#### 6.23.3.11 string CarbonAnalyzerAPI.Interfaces.ICapiStreamChannel.Type [get], [set]

The type of this channel. Type `CarbonEnum.Capi.ChannelType`. to see a list of available types. e.g. `CarbonEnum.Capi.ChannelType.TYPE_SYMBOL`

The documentation for this interface was generated from the following file:

- [ICapiStreamChannel.cs](#)

## 6.24 CarbonAnalyzerAPI.Interfaces.ICapiStreamChannels Interface Reference

The interface to the collection of `CapiStreamChannels`.

### Properties

- [ICapiStreamChannel this\[int index\]](#) [get]  
*Gets the CapiStreamChannel by the indicated index.*
- [ICapiStreamChannel this\[string index\]](#) [get]  
*Gets the CapiStreamChannel by the indicated name.*
- int [Length](#) [get]  
*The number of ICapiStreamChannels.*

### 6.24.1 Detailed Description

The interface to the collection of `CapiStreamChannels`.

### 6.24.2 Property Documentation

#### 6.24.2.1 int CarbonAnalyzerAPI.Interfaces.ICapiStreamChannels.Length [get]

The number of [ICapiStreamChannels](#).

#### 6.24.2.2 ICapiStreamChannel CarbonAnalyzerAPI.Interfaces.ICapiStreamChannels.this[int index] [get]

Gets the `CapiStreamChannel` by the indicated index.

#### Parameters

<i>index</i>	Which <code>CapiStreamChannel</code> to return.
--------------	---

#### Returns

Returns the `CapiStreamChannel` by the indicated index.

### 6.24.2.3 ICapiStreamChannel CarbonAnalyzerAPI.Interfaces.ICapiStreamChannels.this[string index] [get]

Gets the CapiStreamChannel by the indicated name.

## Parameters

<i>index</i>	The name of the channel to return.
--------------	------------------------------------

## Returns

Returns the channel by the indicated name.

The documentation for this interface was generated from the following file:

- [ICapiStreamChannels.cs](#)

## 6.25 CarbonAnalyzerAPI.Interfaces.ICapiStreamChannelSymbol Interface Reference

The interface to each CapiStreamChannelSymbol

### Public Member Functions

- Int64 [MinEventCycle](#) ()  
*Maximum cycle on this channel that event occurs.*
- Int64 [MaxEventCycle](#) ()  
*Minimum cycle on this channel that event occurs.*

### Properties

- Int64 [ID](#) [get]  
*The internal ID associated with this [ICapiStreamChannelSymbol](#)*
- Int64 [CapiStreamChannelID](#) [get]  
*The internal StreamChannelID associated with this [ICapiStreamChannelSymbol](#)*
- string [Name](#) [get, set]  
*The name of the the [ICapiStreamChannelSymbol](#) e.g. "Cache Miss (0x03)"*
- Int64 [Value](#) [get, set]  
*The value associated with this [ICapiStreamChannelSymbol](#). e.g. 1*

### 6.25.1 Detailed Description

The interface to each CapiStreamChannelSymbol

### 6.25.2 Member Function Documentation

#### 6.25.2.1 Int64 CarbonAnalyzerAPI.Interfaces.ICapiStreamChannelSymbol.MaxEventCycle ( )

Minimum cycle on this channel that event occurs.

#### Returns

## 6.25.2.2 Int64 CarbonAnalyzerAPI.Interfaces.ICapiStreamChannelSymbol.MinEventCycle ( )

Maximum cycle on this channel that event occurs.

Returns

## 6.25.3 Property Documentation

## 6.25.3.1 Int64 CarbonAnalyzerAPI.Interfaces.ICapiStreamChannelSymbol.CapiStreamChannelID [get]

The internal StreamChannelID associated with this ICapiStreamChannelSymbol

## 6.25.3.2 Int64 CarbonAnalyzerAPI.Interfaces.ICapiStreamChannelSymbol.ID [get]

The internal ID associated with this [ICapiStreamChannelSymbol](#)

## 6.25.3.3 string CarbonAnalyzerAPI.Interfaces.ICapiStreamChannelSymbol.Name [get], [set]

The name of the the [ICapiStreamChannelSymbol](#) e.g. "Cache Miss (0x03)"

## 6.25.3.4 Int64 CarbonAnalyzerAPI.Interfaces.ICapiStreamChannelSymbol.Value [get], [set]

The value associated with this [ICapiStreamChannelSymbol](#). e.g. 1

The documentation for this interface was generated from the following file:

- [ICapiStreamChannelSymbol.cs](#)

## 6.26 CarbonAnalyzerAPI.Interfaces.ICapiStreamChannelSymbols Interface Reference

The interface to the collection of CapiStreamChannelSymbols.

## Properties

- int [Length](#) [get]  
*The number of [ICapiStreamChannels](#) in this collection.*

## 6.26.1 Detailed Description

The interface to the collection of CapiStreamChannelSymbols.

## 6.26.2 Property Documentation

## 6.26.2.1 int CarbonAnalyzerAPI.Interfaces.ICapiStreamChannelSymbols.Length [get]

The number of [ICapiStreamChannels](#) in this collection.

The documentation for this interface was generated from the following file:

- [ICapiStreamChannelSymbols.cs](#)

## 6.27 CarbonAnalyzerAPI.Interfaces.ICapiStreams Interface Reference

The interface to the collection of CapiStreams.

### Public Member Functions

- [ICapiStream Add](#) (string name, string description, string label, string sourceInstance)  
*Add a particular stream.*

### Properties

- [ICapiStream this\[int index\]](#) [get]  
*Gets the CapiStream by the indicated index.*
- [ICapiStream this\[string index\]](#) [get]  
*Gets the CapiStream by the indicated name.*
- int [Length](#) [get]  
*The number of streams in this collection.*

### 6.27.1 Detailed Description

The interface to the collection of CapiStreams.

### 6.27.2 Member Function Documentation

#### 6.27.2.1 ICapiStream CarbonAnalyzerAPI.Interfaces.ICapiStreams.Add ( string name, string description, string label, string sourceInstance )

Add a particular stream.

##### Parameters

<i>name</i>	The stream name.
<i>description</i>	The stream description.
<i>label</i>	Another name for the stream.
<i>sourceInstance</i>	The instance associated with this stream. e.g. "A9-MP1-PL301.CortexA9MP"

##### Returns

Returns the CapiStream just added.

### 6.27.3 Property Documentation

#### 6.27.3.1 int CarbonAnalyzerAPI.Interfaces.ICapiStreams.Length [get]

The number of streams in this collection.

#### 6.27.3.2 ICapiStream CarbonAnalyzerAPI.Interfaces.ICapiStreams.this[int index] [get]

Gets the CapiStream by the indicated index.



## Parameters

<i>index</i>	Which CapiStream to return.
--------------	-----------------------------

## Returns

Returns the CapiStream by the indicated index.

**6.27.3.3 ICapiStream CarbonAnalyzerAPI.Interfaces.ICapiStreams.this[string index] [get]**

Gets the CapiStream by the indicated name.

## Parameters

<i>index</i>	The name of the CapiStream.
--------------	-----------------------------

## Returns

Returns the CapiStream by the indicated name.

The documentation for this interface was generated from the following file:

- [ICapiStreams.cs](#)

**6.28 CarbonAnalyzerAPI.Interfaces.ICHITransaction Interface Reference**

The interface to each CHITransaction.

**Properties**

- Int64 [ID](#) [get]  
*The ID in this table (not necessarily the id of the transaction).*
- Int64 [TransactionID](#) [get, set]  
*The transaction ID*
- Int64 [TransactionConnectionID](#) [get]  
*The particular connection ID associated with this transaction.*
- [ICHITransactionFlits TransactionsFlits](#) [get]  
*The collection of transactionFlits for this transaction.*

**6.28.1 Detailed Description**

The interface to each CHITransaction.

**6.28.2 Property Documentation****6.28.2.1 Int64 CarbonAnalyzerAPI.Interfaces.ICHITransaction.ID [get]**

The ID in this table (not necessarily the id of the transaction).

**6.28.2.2 Int64 CarbonAnalyzerAPI.Interfaces.ICHITransaction.TransactionConnectionID [get]**

The particular connection ID associated with this transaction.

### 6.28.2.3 Int64 CarbonAnalyzerAPI.Interfaces.ICHITransaction.TransactionID [get], [set]

The transaction ID

### 6.28.2.4 ICHITransactionFlits CarbonAnalyzerAPI.Interfaces.ICHITransaction.TransactionsFlits [get]

The collection of transactionFlits for this transaction.

The documentation for this interface was generated from the following file:

- [ICHITransaction.cs](#)

## 6.29 CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit Interface Reference

The interface to each CHITransactionFlit.

### Public Member Functions

- bool [GetID](#) (ref Int64 refParameter)  
*The unique ID for this transactionFlit.*
- bool [GetTransactionID](#) (ref Int64 refParameter)  
*Returns the ID of the CHI Transaction.*
- bool [GetChannel](#) (ref CarbonEnum.Transaction.Channel refParameter)  
*Get the channel for this transaction flit.*
- bool [GetCycle](#) (ref Int64 refParameter)  
*Get the Cycle Number for this transaction flit.*
- bool [GetQoS](#) (ref Int64 refParameter)  
*Get the Quality of Service for this transaction flit.*
- bool [GetTgtID](#) (ref Int64 refParameter)  
*Get the target id for this flit.*
- bool [GetSrcID](#) (ref Int64 refParameter)  
*Get the source id for this flit.*
- bool [GetRawOpCode](#) (ref Int64 opcode)  
*Get integer value for opcode.*
- bool [GetTxnID](#) (ref Int64 refParameter)  
*Get the TxnID (per AMBA5 spec) for this flit.*
- bool [GetOpcode](#) (ref CarbonEnum.Transaction.RXDATOpcode refParameter)  
*Get the opcode associated with this flit.*
- bool [GetOpcode](#) (ref CarbonEnum.Transaction.TXDATOpcode refParameter)  
*Get the opcode associated with this flit.*
- bool [GetOpcode](#) (ref CarbonEnum.Transaction.RXREQOpcode refParameter)  
*Get the opcode associated with this flit.*
- bool [GetOpcode](#) (ref CarbonEnum.Transaction.TXREQOpcode refParameter)  
*Get the opcode associated with this flit.*
- bool [GetOpcode](#) (ref CarbonEnum.Transaction.RXSNPOpcode refParameter)  
*Get the opcode associated with this flit.*
- bool [GetOpcode](#) (ref CarbonEnum.Transaction.TXSNPOpcode refParameter)  
*Get the opcode associated with this flit.*
- bool [GetOpcode](#) (ref CarbonEnum.Transaction.RXRSPOpcode refParameter)  
*Get the opcode associated with this flit.*

- bool [GetOpcode](#) (ref CarbonEnum.Transaction.TXRSPOpcode refParameter)  
*Get the opcode associated with this flit.*
- bool [GetRawResponseError](#) (ref Int64 responseCode)  
*Get integer value for response code.*
- bool [GetRespErr](#) (ref CarbonEnum.Transaction.RXRSPRespErr refParameter)  
*Get the response error code for this flit.*
- bool [GetRespErr](#) (ref CarbonEnum.Transaction.TXRSPRespErr refParameter)  
*Get the response error code for this flit.*
- bool [GetRawResponse](#) (ref Int64 refParameter)  
*Gets raw integer value for the response field.*
- bool [GetResp](#) (ref CarbonEnum.Transaction.RXRSPResp refParameter)  
*Get the response error code for this flit.*
- bool [GetResp](#) (ref CarbonEnum.Transaction.TXRSPResp refParameter)  
*Get the response error code for this flit.*
- bool [GetDBID](#) (ref Int64 refParameter)  
*Get the DBID (data buffer ID) for this flit.*
- bool [GetCCID](#) (ref Int64 refParameter)  
*Get the CCID (critical chunk ID) for this flit.*
- bool [GetDataID](#) (ref Int64 refParameter)  
*Get the DataID for this flit.*
- bool [GetRSVDC](#) (ref Int64 refParameter)  
*Get the RSVDC (Reserved for customer) for this flit.*
- bool [GetBE](#) (ref Int64 refParameter)  
*Get the Byte Enable value for this flit.*
- bool [GetData](#) (ref Int64 refParameter)  
*Get data bits 0..63 for this flit.*
- bool [GetData2](#) (ref Int64 refParameter)  
*Get data bits 64..127 for this flit.*
- bool [GetData4](#) (ref Int64 refParameter)  
*Get data bits 128..191 for this flit.*
- bool [GetData6](#) (ref Int64 refParameter)  
*Get data bits 192..255 for this flit.*
- bool [GetData8](#) (ref Int64 refParameter)  
*Get data bits 256..319 for this flit.*
- bool [GetData10](#) (ref Int64 refParameter)  
*Get data bits 320..383 for this flit.*
- bool [GetData12](#) (ref Int64 refParameter)  
*Get data bits 384..447 for this flit.*
- bool [GetData14](#) (ref Int64 refParameter)  
*Get data bits 448..511 for this flit.*
- bool [GetSize](#) (ref CarbonEnum.Transaction.TXREQSize refParameter)  
*Get the size associated with this flit.*
- bool [GetSize](#) (ref CarbonEnum.Transaction.RXREQSize refParameter)  
*Get the size associated with this flit.*
- bool [GetRawSize](#) (ref Int64 size)  
*Get the raw size from the profile file.*
- bool [GetAddr](#) (ref Int64 refParameter)  
*Get the address associated with this flit.*
- bool [GetNS](#) (ref Int64 refParameter)  
*Get the NS (non secure) bit associated with this flit.*
- bool [GetLikelyShared](#) (ref Int64 refParameter)

- Get the likely shared value associated with this flit.*

  - bool [GetDynPCrd](#) (ref Int64 refParameter)

*Get the DYNPCrd (Dynamic Protocol Credit) associated with this flit.*
- bool [GetOrder](#) (ref Int64 refParameter)

*Get the order associated with this flit.*
- bool [GetPCrdType](#) (ref Int64 refParameter)

*Get the PCRDType (Dynamic Protocol Credit Type) associated with this flit.*
- bool [GetMemAttr](#) (ref Int64 refParameter)

*Get the memory attribute associated with this flit.*
- bool [GetSnpAttr](#) (ref Int64 refParameter)

*Get the snoop attribute associated with this flit.*
- bool [GetLPID](#) (ref Int64 refParameter)

*Get the LPID (Logical Processor ID) associated with this flit.*
- bool [GetExcl](#) (ref Int64 refParameter)

*Get the exclusive field associated with this flit.*
- bool [GetExpCompAck](#) (ref Int64 refParameter)

*Get the ExpCompAck (Expect Complete Acknowledge) field associated with this flit.*
- bool [GetREQOpcodeType](#) (ref Int64 refParameter)

*Get the Request OpcodeType associated with this flit.*
- bool [SetChannel](#) (CarbonEnum.Transaction.Channel refParameter)

*Sets the Channel of the flit.*
- bool [SetCycle](#) (Int64 refParameter)

*Sets the Cycle of the flit.*
- bool [SetQoS](#) (Int64 refParameter)

*Sets the QoS of the flit.*
- bool [SetTgtID](#) (Int64 refParameter)

*Sets the TgtID of the flit.*
- bool [SetSrcID](#) (Int64 refParameter)

*Sets the SrcID of the flit.*
- bool [SetTxnID](#) (Int64 refParameter)

*Sets the TxnID of the flit.*
- bool [SetDBID](#) (Int64 refParameter)

*Sets the DBID of the flit.*
- bool [SetCCID](#) (Int64 refParameter)

*Sets the CCID of the flit.*
- bool [SetDataID](#) (Int64 refParameter)

*Sets the DataID of the flit.*
- bool [SetRSVDC](#) (Int64 refParameter)

*Sets the RSVDC of the flit.*
- bool [SetBE](#) (Int64 refParameter)

*Sets the BE of the flit.*
- bool [SetData](#) (Int64 refParameter)

*Sets the Data of the flit.*
- bool [SetData2](#) (Int64 refParameter)

*Sets the Data2 of the flit.*
- bool [SetData4](#) (Int64 refParameter)

*Sets the Data4 of the flit.*
- bool [SetData6](#) (Int64 refParameter)

*Sets the Data6 of the flit.*
- bool [SetData8](#) (Int64 refParameter)

*Sets the Data8 of the flit.*

- bool [SetData10](#) (Int64 refParameter)  
*Sets the Data10 of the flit.*
- bool [SetData12](#) (Int64 refParameter)  
*Sets the Data12 of the flit.*
- bool [SetData14](#) (Int64 refParameter)  
*Sets the Data14 of the flit.*
- bool [SetAddr](#) (Int64 refParameter)  
*Sets the Size of the flit.*
- bool [SetNS](#) (Int64 refParameter)  
*Sets the NS of the flit.*
- bool [SetLikelyShared](#) (Int64 refParameter)  
*Sets the LikelyShared of the flit.*
- bool [SetDynPCrd](#) (Int64 refParameter)  
*Sets the DynPCrd of the flit.*
- bool [SetOrder](#) (Int64 refParameter)  
*Sets the Order of the flit.*
- bool [SetPCrdType](#) (Int64 refParameter)  
*Sets the PCrdType of the flit.*
- bool [SetMemAttr](#) (Int64 refParameter)  
*Sets the MemAttr of the flit.*
- bool [SetSnpAttr](#) (Int64 refParameter)  
*Sets the SnpAttr of the flit.*
- bool [SetLPID](#) (Int64 refParameter)  
*Sets the LPID of the flit.*
- bool [SetExcl](#) (Int64 refParameter)  
*Sets the Excl of the flit.*
- bool [SetExpCompAck](#) (Int64 refParameter)  
*Sets the ExpCompAck of the flit.*
- bool [SetREQOpcodeType](#) (Int64 refParameter)  
*Sets the 64 of the flit.*
- bool [SetOpcode](#) (CarbonEnum.Transaction.RXDATOpcode refParameter)  
*Sets the Opcode of the flit.*
- bool [SetOpcode](#) (CarbonEnum.Transaction.TXDATOpcode refParameter)  
*Sets the Opcode of the flit.*
- bool [SetOpcode](#) (CarbonEnum.Transaction.RXREQOpcode refParameter)  
*Sets the Opcode of the flit.*
- bool [SetOpcode](#) (CarbonEnum.Transaction.TXREQOpcode refParameter)  
*Sets the Opcode of the flit.*
- bool [SetOpcode](#) (CarbonEnum.Transaction.RXSNPOpcode refParameter)  
*Sets the Opcode of the flit.*
- bool [SetOpcode](#) (CarbonEnum.Transaction.TXSNPOpcode refParameter)  
*Sets the Opcode of the flit.*
- bool [SetOpcode](#) (CarbonEnum.Transaction.RXRSPOpcode refParameter)  
*Sets the Opcode of the flit.*
- bool [SetOpcode](#) (CarbonEnum.Transaction.TXRSPOpcode refParameter)  
*Sets the Opcode of the flit.*
- bool [SetRespErr](#) (CarbonEnum.Transaction.RXRSPRespErr refParameter)  
*Sets the RespErr of the flit.*
- bool [SetRespErr](#) (CarbonEnum.Transaction.TXRSPRespErr refParameter)  
*Sets the RespErr of the flit.*
- bool [SetResp](#) (CarbonEnum.Transaction.RXRSPResp refParameter)

- Sets the Resp of the flit.*  
 • bool [SetResp](#) (CarbonEnum.Transaction.TXRSPResp refParameter)  
*Sets the Resp of the flit.*
- bool [SetSize](#) (CarbonEnum.Transaction.TXREQSize size)  
*Sets the Size of the flit.*
- bool [SetSize](#) (CarbonEnum.Transaction.RXREQSize size)  
*Sets the Size of the flit.*

## Properties

- Int64 [Cycle](#) [get]  
*Gets the cycle (convenience function since always valid). NYI*
- Int64 [TransactionID](#) [get]  
*Returns the ID of the CHI Transaction (convenience function since always valid).*
- Int64 [Channel](#) [get]  
*The particular channel that a flit is on. (convenience function since always valid)*
- Int64 [ID](#) [get]  
*The ID of this Flit*
- Int64 [FlitID](#) [get]  
*The Flit ID of this flit*
- Int64 [UserField](#) [get, set]  
*UserField that can be retrieved and set.*

### 6.29.1 Detailed Description

The interface to each CHITransactionFlit.

### 6.29.2 Member Function Documentation

#### 6.29.2.1 bool CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.GetAddr ( ref Int64 refParameter )

Get the address associated with this flit.

##### Parameters

<i>refParameter</i>	The returned value. Only valid if methods return value is true !
---------------------	--

##### Returns

True if successful. It is very important to check this value.

#### 6.29.2.2 bool CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.GetBE ( ref Int64 refParameter )

Get the Byte Enable value for this flit.

##### Parameters

<i>refParameter</i>	The returned value. Only valid if methods return value is true !
---------------------	--

##### Returns

True if successful. It is very important to check this value.

6.29.2.3 `bool CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.GetCCID ( ref Int64 refParameter )`

Get the CCID (critical chunk ID) for this flit.

**Parameters**

<i>refParameter</i>	The returned value. Only valid if methods return value is true !
---------------------	--

**Returns**

True if successful. It is very important to check this value.

#### 6.29.2.4 **bool** CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.GetChannel ( *ref* CarbonEnum.Transaction.Channel *refParameter* )

Get the channel for this transaction flit.

**Parameters**

<i>refParameter</i>	The returned value. Only valid if methods return value is true !
---------------------	--

**Returns**

True if successful. It is very important to check this value.

#### 6.29.2.5 **bool** CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.GetCycle ( *ref* Int64 *refParameter* )

Get the Cycle Number for this transaction flit.

**Parameters**

<i>refParameter</i>	The returned value. Only valid if methods return value is true !
---------------------	--

**Returns**

True if successful. It is very important to check this value.

#### 6.29.2.6 **bool** CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.GetData ( *ref* Int64 *refParameter* )

Get data bits 0..63 for this flit.

**Parameters**

<i>refParameter</i>	The returned value. Only valid if methods return value is true !
---------------------	--

**Returns**

True if successful. It is very important to check this value.

#### 6.29.2.7 **bool** CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.GetData10 ( *ref* Int64 *refParameter* )

Get data bits 320..383 for this flit.

**Parameters**

<i>refParameter</i>	The returned value. Only valid if methods return value is true !
---------------------	--

**Returns**

True if successful. It is very important to check this value.



6.29.2.8    `bool CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.GetData12 ( ref Int64 refParameter )`

Get data bits 384..447 for this flit.

## Parameters

<i>refParameter</i>	The returned value. Only valid if methods return value is true !
---------------------	--

## Returns

True if successful. It is very important to check this value.

#### 6.29.2.9 bool CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.GetData14 ( ref Int64 *refParameter* )

Get data bits 448..511 for this flit.

## Parameters

<i>refParameter</i>	The returned value. Only valid if methods return value is true !
---------------------	--

## Returns

True if successful. It is very important to check this value.

#### 6.29.2.10 bool CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.GetData2 ( ref Int64 *refParameter* )

Get data bits 64..127 for this flit.

## Parameters

<i>refParameter</i>	The returned value. Only valid if methods return value is true !
---------------------	--

## Returns

True if successful. It is very important to check this value.

#### 6.29.2.11 bool CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.GetData4 ( ref Int64 *refParameter* )

Get data bits 128..191 for this flit.

## Parameters

<i>refParameter</i>	The returned value. Only valid if methods return value is true !
---------------------	--

## Returns

True if successful. It is very important to check this value.

#### 6.29.2.12 bool CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.GetData6 ( ref Int64 *refParameter* )

Get data bits 192..255 for this flit.

## Parameters

<i>refParameter</i>	The returned value. Only valid if methods return value is true !
---------------------	--

## Returns

True if successful. It is very important to check this value.

#### 6.29.2.13 bool CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.GetData8 ( ref Int64 *refParameter* )

Get data bits 256..319 for this flit.

## Parameters

<i>refParameter</i>	The returned value. Only valid if methods return value is true !
---------------------	--

## Returns

True if successful. It is very important to check this value.

6.29.2.14 bool CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.GetDataID ( ref Int64 *refParameter* )

Get the DataID for this flit.

## Parameters

<i>refParameter</i>	The returned value. Only valid if methods return value is true !
---------------------	--

## Returns

True if successful. It is very important to check this value.

6.29.2.15 bool CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.GetDBID ( ref Int64 *refParameter* )

Get the DBID (data buffer ID) for this flit.

## Parameters

<i>refParameter</i>	The returned value. Only valid if methods return value is true !
---------------------	--

## Returns

True if successful. It is very important to check this value.

6.29.2.16 bool CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.GetDynPCrd ( ref Int64 *refParameter* )

Get the DYNPCrd (Dynamic Protocol Credit) associated with this flit.

## Parameters

<i>refParameter</i>	The returned value. Only valid if methods return value is true !
---------------------	--

## Returns

True if successful. It is very important to check this value.

6.29.2.17 bool CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.GetExcl ( ref Int64 *refParameter* )

Get the exclusive field associated with this flit.

## Parameters

<i>refParameter</i>	The returned value. Only valid if methods return value is true !
---------------------	--

## Returns

True if successful. It is very important to check this value.

6.29.2.18    `bool CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.GetExpCompAck ( ref Int64 refParameter )`

Get the ExpCompAck (Expect Complete Acknowledge) field associated with this flit.

## Parameters

<i>refParameter</i>	The returned value. Only valid if methods return value is true !
---------------------	--

## Returns

True if successful. It is very important to check this value.

**6.29.2.19 bool CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.GetID ( ref Int64 *refParameter* )**

The unique ID for this transactionFlit.

## Parameters

<i>refParameter</i>	The returned value. Only valid if methods return value is true !
---------------------	--

## Returns

True if successful. It is very important to check this value.

**6.29.2.20 bool CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.GetLikelyShared ( ref Int64 *refParameter* )**

Get the likely shared value associated with this flit.

## Parameters

<i>refParameter</i>	The returned value. Only valid if methods return value is true !
---------------------	--

## Returns

True if successful. It is very important to check this value.

**6.29.2.21 bool CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.GetLPID ( ref Int64 *refParameter* )**

Get the LPID (Logical Processor ID) associated with this flit.

## Parameters

<i>refParameter</i>	The returned value. Only valid if methods return value is true !
---------------------	--

## Returns

True if successful. It is very important to check this value.

**6.29.2.22 bool CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.GetMemAttr ( ref Int64 *refParameter* )**

Get the memory attribute associated with this flit.

## Parameters

<i>refParameter</i>	The returned value. Only valid if methods return value is true !
---------------------	--

## Returns

True if successful. It is very important to check this value.

6.29.2.23 `bool CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.GetNS ( ref Int64 refParameter )`

Get the NS (non secure) bit associated with this flit.

## Parameters

<i>refParameter</i>	The returned value. Only valid if methods return value is true !
---------------------	--

## Returns

True if successful. It is very important to check this value.

**6.29.2.24** `bool CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.GetOpcode ( ref CarbonEnum.Transaction.RXDATOpcode refParameter )`

Get the opcode associated with this flit.

## Parameters

<i>refParameter</i>	The returned value. Only valid if methods return value is true !
---------------------	--

## Returns

True if successful. It is very important to check this value.

**6.29.2.25** `bool CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.GetOpcode ( ref CarbonEnum.Transaction.TXDATOpcode refParameter )`

Get the opcode associated with this flit.

## Parameters

<i>refParameter</i>	The returned value. Only valid if methods return value is true !
---------------------	--

## Returns

True if successful. It is very important to check this value.

**6.29.2.26** `bool CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.GetOpcode ( ref CarbonEnum.Transaction.RXREQOpcode refParameter )`

Get the opcode associated with this flit.

## Parameters

<i>refParameter</i>	The returned value. Only valid if methods return value is true !
---------------------	--

## Returns

True if successful. It is very important to check this value.

**6.29.2.27** `bool CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.GetOpcode ( ref CarbonEnum.Transaction.TXREQOpcode refParameter )`

Get the opcode associated with this flit.

**Parameters**

<i>refParameter</i>	The returned value. Only valid if methods return value is true !
---------------------	--

**Returns**

True if successful. It is very important to check this value.

**6.29.2.28** `bool CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.GetOpcode ( ref CarbonEnum.Transaction.RXSNPOpcode  
refParameter )`

Get the opcode associated with this flit.

**Parameters**

<i>refParameter</i>	The returned value. Only valid if methods return value is true !
---------------------	--

**Returns**

True if successful. It is very important to check this value.

**6.29.2.29** `bool CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.GetOpcode ( ref CarbonEnum.Transaction.TXSNPOpcode  
refParameter )`

Get the opcode associated with this flit.

**Parameters**

<i>refParameter</i>	The returned value. Only valid if methods return value is true !
---------------------	--

**Returns**

True if successful. It is very important to check this value.

**6.29.2.30** `bool CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.GetOpcode ( ref CarbonEnum.Transaction.RXRSPOpcode  
refParameter )`

Get the opcode associated with this flit.

**Parameters**

<i>refParameter</i>	The returned value. Only valid if methods return value is true !
---------------------	--

**Returns**

True if successful. It is very important to check this value.

**6.29.2.31** `bool CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.GetOpcode ( ref CarbonEnum.Transaction.TXRSPOpcode  
refParameter )`

Get the opcode associated with this flit.



## Parameters

<i>refParameter</i>	The returned value. Only valid if methods return value is true !
---------------------	--

## Returns

True if successful. It is very important to check this value.

**6.29.2.32 bool CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.GetOrder ( ref Int64 *refParameter* )**

Get the order associated with this flit.

## Parameters

<i>refParameter</i>	The returned value. Only valid if methods return value is true !
---------------------	--

## Returns

True if successful. It is very important to check this value.

**6.29.2.33 bool CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.GetPCrdType ( ref Int64 *refParameter* )**

Get the PCRDTType (Dynamic Protocol Credit Type) associated with this flit.

## Parameters

<i>refParameter</i>	The returned value. Only valid if methods return value is true !
---------------------	--

## Returns

True if successful. It is very important to check this value.

**6.29.2.34 bool CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.GetQoS ( ref Int64 *refParameter* )**

Get the Quality of Service for this transaction flit.

## Parameters

<i>refParameter</i>	The returned value. Only valid if methods return value is true !
---------------------	--

## Returns

True if successful. It is very important to check this value.

**6.29.2.35 bool CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.GetRawOpCode ( ref Int64 *opcode* )**

Get integer value for opcode.

## Parameters

<i>opcode</i>	
---------------	--

## Returns

6.29.2.36    `bool CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.GetRawResponse ( ref Int64 refParameter )`

Gets raw integer value for the response field.

## Parameters

<i>refParameter</i>	
---------------------	--

## Returns

6.29.2.37 **bool** CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.GetRawResponseError ( *ref* Int64 *responseCode* )

Get integer value for response code.

## Parameters

<i>opcode</i>	
---------------	--

## Returns

6.29.2.38 **bool** CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.GetRawSize ( *ref* Int64 *size* )

Get the raw size from the profile file.

## Parameters

<i>refParameter</i>	
---------------------	--

## Returns

6.29.2.39 **bool** CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.GetREQOpcodeType ( *ref* Int64 *refParameter* )

Get the Request OpcodeType associated with this flit.

## Parameters

<i>refParameter</i>	The returned value. Only valid if methods return value is true !
---------------------	--

## Returns

True if successful. It is very important to check this value.

6.29.2.40 **bool** CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.GetResp ( *ref* CarbonEnum.Transaction.RXRSPResp *refParameter* )

Get the response error code for this flit.

## Parameters

\_\_\_\_\_

<i>refParameter</i>	The returned value. Only valid if methods return value is true !
---------------------	--

**Returns**

True if successful. It is very important to check this value.

**6.29.2.41** `bool CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.GetResponse ( ref CarbonEnum.Transaction.TXRSPResp refParameter )`

Get the response error code for this flit.

**Parameters**

<i>refParameter</i>	The returned value. Only valid if methods return value is true !
---------------------	--

**Returns**

True if successful. It is very important to check this value.

**6.29.2.42** `bool CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.GetResponseErr ( ref CarbonEnum.Transaction.RXRSPRespErr refParameter )`

Get the response error code for this flit.

**Parameters**

<i>refParameter</i>	The returned value. Only valid if methods return value is true !
---------------------	--

**Returns**

True if successful. It is very important to check this value.

**6.29.2.43** `bool CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.GetResponseErr ( ref CarbonEnum.Transaction.TXRSPRespErr refParameter )`

Get the response error code for this flit.

**Parameters**

<i>refParameter</i>	The returned value. Only valid if methods return value is true !
---------------------	--

**Returns**

True if successful. It is very important to check this value.

**6.29.2.44** `bool CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.GetRSVDC ( ref Int64 refParameter )`

Get the RSVDC (Reserved for customer) for this flit.

## Parameters

<i>refParameter</i>	The returned value. Only valid if methods return value is true !
---------------------	--

## Returns

True if successful. It is very important to check this value.

#### 6.29.2.45 bool CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.GetSize ( ref CarbonEnum.Transaction.TXREQSize *refParameter* )

Get the size associated with this flit.

## Parameters

<i>refParameter</i>	The returned value. Only valid if methods return value is true !
---------------------	--

## Returns

True if successful. It is very important to check this value.

#### 6.29.2.46 bool CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.GetSize ( ref CarbonEnum.Transaction.RXREQSize *refParameter* )

Get the size associated with this flit.

## Parameters

<i>refParameter</i>	The returned value. Only valid if methods return value is true !
---------------------	--

## Returns

True if successful. It is very important to check this value.

#### 6.29.2.47 bool CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.GetSnpAttr ( ref Int64 *refParameter* )

Get the snoop attribute associated with this flit.

## Parameters

<i>refParameter</i>	The returned value. Only valid if methods return value is true !
---------------------	--

## Returns

True if successful. It is very important to check this value.

#### 6.29.2.48 bool CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.GetSrcID ( ref Int64 *refParameter* )

Get the source id for this flit.

## Parameters

---

<i>refParameter</i>	The returned value. Only valid if methods return value is true !
---------------------	--

**Returns**

True if successful. It is very important to check this value.

6.29.2.49 **bool** CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.GetTgtID ( *ref* Int64 *refParameter* )

Get the target id for this flit.

**Parameters**

<i>refParameter</i>	The returned value. Only valid if methods return value is true !
---------------------	--

**Returns**

True if successful. It is very important to check this value.

6.29.2.50 **bool** CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.GetTransactionID ( *ref* Int64 *refParameter* )

Returns the ID of the CHI Transaction.

**Parameters**

<i>refParameter</i>	The returned value. Only valid if methods return value is true !
---------------------	--

**Returns**

True if successful. It is very important to check this value.

6.29.2.51 **bool** CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.GetTxnID ( *ref* Int64 *refParameter* )

Get the TxnID (per AMBA5 spec) for this flit.

**Parameters**

<i>refParameter</i>	The returned value. Only valid if methods return value is true !
---------------------	--

**Returns**

True if successful. It is very important to check this value.

6.29.2.52 **bool** CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.SetAddr ( Int64 *refParameter* )

Sets the Size of the flit.

**Parameters**

<i>refParameter</i>	The Size to be set
---------------------	--------------------

**Returns**

True if successful. It is very important to check this return code.

Sets the Addr of the flit.

## Parameters

<i>refParameter</i>	The Addr to be set
---------------------	--------------------

## Returns

True if successful. It is very important to check this return code.

**6.29.2.53 bool CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.SetBE ( Int64 *refParameter* )**

Sets the BE of the flit.

## Parameters

<i>refParameter</i>	The BE to be set
---------------------	------------------

## Returns

True if successful. It is very important to check this return code.

**6.29.2.54 bool CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.SetCCID ( Int64 *refParameter* )**

Sets the CCID of the flit.

## Parameters

<i>refParameter</i>	The CCID to be set
---------------------	--------------------

## Returns

True if successful. It is very important to check this return code.

**6.29.2.55 bool CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.SetChannel ( CarbonEnum.Transaction.Channel *refParameter* )**

Sets the Channel of the flit.

## Parameters

<i>refParameter</i>	The Channel to be set
---------------------	-----------------------

## Returns

True if successful. It is very important to check this return code.

**6.29.2.56 bool CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.SetCycle ( Int64 *refParameter* )**

Sets the Cycle of the flit.

## Parameters

<i>refParameter</i>	The Cycle to be set
---------------------	---------------------

## Returns

True if successful. It is very important to check this return code.

6.29.2.57    `bool CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.SetData ( Int64 refParameter )`

Sets the Data of the flit.



## Parameters

<i>refParameter</i>	The Data to be set
---------------------	--------------------

## Returns

True if successful. It is very important to check this return code.

**6.29.2.58 bool CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.SetData10 ( Int64 *refParameter* )**

Sets the Data10 of the flit.

## Parameters

<i>refParameter</i>	The Data10 to be set
---------------------	----------------------

## Returns

True if successful. It is very important to check this return code.

**6.29.2.59 bool CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.SetData12 ( Int64 *refParameter* )**

Sets the Data12 of the flit.

## Parameters

<i>refParameter</i>	The Data12 to be set
---------------------	----------------------

## Returns

True if successful. It is very important to check this return code.

**6.29.2.60 bool CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.SetData14 ( Int64 *refParameter* )**

Sets the Data14 of the flit.

## Parameters

<i>refParameter</i>	The Data14 to be set
---------------------	----------------------

## Returns

True if successful. It is very important to check this return code.

**6.29.2.61 bool CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.SetData2 ( Int64 *refParameter* )**

Sets the Data2 of the flit.

## Parameters

<i>refParameter</i>	The Data2 to be set
---------------------	---------------------

## Returns

True if successful. It is very important to check this return code.

**6.29.2.62 bool CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.SetData4 ( Int64 *refParameter* )**

Sets the Data4 of the flit.

## Parameters

<i>refParameter</i>	The Data4 to be set
---------------------	---------------------

## Returns

True if successful. It is very important to check this return code.

**6.29.2.63    bool CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.SetData6 ( Int64 *refParameter* )**

Sets the Data6 of the flit.

## Parameters

<i>refParameter</i>	The Data6 to be set
---------------------	---------------------

## Returns

True if successful. It is very important to check this return code.

**6.29.2.64    bool CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.SetData8 ( Int64 *refParameter* )**

Sets the Data8 of the flit.

## Parameters

<i>refParameter</i>	The Data8 to be set
---------------------	---------------------

## Returns

True if successful. It is very important to check this return code.

**6.29.2.65    bool CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.SetDataID ( Int64 *refParameter* )**

Sets the DataID of the flit.

## Parameters

<i>refParameter</i>	The DataID to be set
---------------------	----------------------

## Returns

True if successful. It is very important to check this return code.

**6.29.2.66    bool CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.SetDBID ( Int64 *refParameter* )**

Sets the DBID of the flit.

## Parameters

<i>refParameter</i>	The DBID to be set
---------------------	--------------------

## Returns

True if successful. It is very important to check this return code.

6.29.2.67 `bool CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.SetDynPCrd ( Int64 refParameter )`

Sets the DynPCrd of the flit.

**Parameters**

<i>refParameter</i>	The DynPCrd to be set
---------------------	-----------------------

**Returns**

True if successful. It is very important to check this return code.

**6.29.2.68 bool CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.SetExcl ( Int64 *refParameter* )**

Sets the Excl of the flit.

**Parameters**

<i>refParameter</i>	The Excl to be set
---------------------	--------------------

**Returns**

True if successful. It is very important to check this return code.

**6.29.2.69 bool CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.SetExpCompAck ( Int64 *refParameter* )**

Sets the ExpCompAck of the flit.

**Parameters**

<i>refParameter</i>	The ExpCompAck to be set
---------------------	--------------------------

**Returns**

True if successful. It is very important to check this return code.

**6.29.2.70 bool CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.SetLikelyShared ( Int64 *refParameter* )**

Sets the LikelyShared of the flit.

**Parameters**

<i>refParameter</i>	The LikelyShared to be set
---------------------	----------------------------

**Returns**

True if successful. It is very important to check this return code.

**6.29.2.71 bool CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.SetLPID ( Int64 *refParameter* )**

Sets the LPID of the flit.

**Parameters**

<i>refParameter</i>	The LPID to be set
---------------------	--------------------

**Returns**

True if successful. It is very important to check this return code.

6.29.2.72 `bool CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.SetMemAttr ( Int64 refParameter )`

Sets the MemAttr of the flit.

## Parameters

<i>refParameter</i>	The MemAttr to be set
---------------------	-----------------------

## Returns

True if successful. It is very important to check this return code.

**6.29.2.73 bool CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.SetNS ( Int64 *refParameter* )**

Sets the NS of the flit.

## Parameters

<i>refParameter</i>	The NS to be set
---------------------	------------------

## Returns

True if successful. It is very important to check this return code.

**6.29.2.74 bool CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.SetOpcode ( CarbonEnum.Transaction.RXDATOpcode *refParameter* )**

Sets the Opcode of the flit.

## Parameters

<i>refParameter</i>	The Opcode to be set
---------------------	----------------------

## Returns

True if successful. It is very important to check this return code.

**6.29.2.75 bool CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.SetOpcode ( CarbonEnum.Transaction.TXDATOpcode *refParameter* )**

Sets the Opcode of the flit.

## Parameters

<i>refParameter</i>	The Opcode to be set
---------------------	----------------------

## Returns

True if successful. It is very important to check this return code.

**6.29.2.76 bool CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.SetOpcode ( CarbonEnum.Transaction.RXREQOpcode *refParameter* )**

Sets the Opcode of the flit.

## Parameters

<i>refParameter</i>	The Opcode to be set
---------------------	----------------------

## Returns

True if successful. It is very important to check this return code.

**6.29.2.77** `bool CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.SetOpcode ( CarbonEnum.Transaction.TXREQOpcode refParameter )`

Sets the Opcode of the flit.

## Parameters

<i>refParameter</i>	The Opcode to be set
---------------------	----------------------

## Returns

True if successful. It is very important to check this return code.

**6.29.2.78** `bool CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.SetOpcode ( CarbonEnum.Transaction.RXSNPOpcode refParameter )`

Sets the Opcode of the flit.

## Parameters

<i>refParameter</i>	The Opcode to be set
---------------------	----------------------

## Returns

True if successful. It is very important to check this return code.

**6.29.2.79** `bool CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.SetOpcode ( CarbonEnum.Transaction.TXSNPOpcode refParameter )`

Sets the Opcode of the flit.

## Parameters

<i>refParameter</i>	The Opcode to be set
---------------------	----------------------

## Returns

True if successful. It is very important to check this return code.

**6.29.2.80** `bool CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.SetOpcode ( CarbonEnum.Transaction.RXRSPOpcode refParameter )`

Sets the Opcode of the flit.

**Parameters**

<i>refParameter</i>	The Opcode to be set
---------------------	----------------------

**Returns**

True if successful. It is very important to check this return code.

**6.29.2.81**    `bool CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.SetOpcode ( CarbonEnum.Transaction.TXRSPOpcode refParameter )`

Sets the Opcode of the flit.

**Parameters**

<i>refParameter</i>	The Opcode to be set
---------------------	----------------------

**Returns**

True if successful. It is very important to check this return code.

**6.29.2.82**    `bool CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.SetOrder ( Int64 refParameter )`

Sets the Order of the flit.

**Parameters**

<i>refParameter</i>	The Order to be set
---------------------	---------------------

**Returns**

True if successful. It is very important to check this return code.

**6.29.2.83**    `bool CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.SetPCrdType ( Int64 refParameter )`

Sets the PCrdType of the flit.

**Parameters**

<i>refParameter</i>	The PCrdType to be set
---------------------	------------------------

**Returns**

True if successful. It is very important to check this return code.

**6.29.2.84**    `bool CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.SetQoS ( Int64 refParameter )`

Sets the QoS of the flit.

**Parameters**

---



<i>refParameter</i>	The QoS to be set
---------------------	-------------------

**Returns**

True if successful. It is very important to check this return code.

**6.29.2.85 bool CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.SetREQOpcodeType ( Int64 *refParameter* )**

Sets the 64 of the flit.

**Parameters**

<i>refParameter</i>	The 64 to be set
---------------------	------------------

**Returns**

True if successful. It is very important to check this return code.

Sets the REQOpcodeType of the flit.

**Parameters**

<i>refParameter</i>	The REQOpcodeType to be set
---------------------	-----------------------------

**Returns**

True if successful. It is very important to check this return code.

**6.29.2.86 bool CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.SetResp ( CarbonEnum.Transaction.RXRSPResp *refParameter* )**

Sets the Resp of the flit.

**Parameters**

<i>refParameter</i>	The Resp to be set
---------------------	--------------------

**Returns**

True if successful. It is very important to check this return code.

**6.29.2.87 bool CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.SetResp ( CarbonEnum.Transaction.TXRSPResp *refParameter* )**

Sets the Resp of the flit.

**Parameters**

<i>refParameter</i>	The Resp to be set
---------------------	--------------------

**Returns**

True if successful. It is very important to check this return code.

**6.29.2.88 bool CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.SetRespErr ( CarbonEnum.Transaction.RXRSPRespErr *refParameter* )**

Sets the RespErr of the flit.

**Parameters**

<i>refParameter</i>	The RespErr to be set
---------------------	-----------------------

**Returns**

True if successful. It is very important to check this return code.

**6.29.2.89** `bool CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.SetRespErr ( CarbonEnum.Transaction.TXRSPRespErr refParameter )`

Sets the RespErr of the flit.

**Parameters**

<i>refParameter</i>	The RespErr to be set
---------------------	-----------------------

**Returns**

True if successful. It is very important to check this return code.

**6.29.2.90** `bool CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.SetRSVDC ( Int64 refParameter )`

Sets the RSVDC of the flit.

**Parameters**

<i>refParameter</i>	The RSVDC to be set
---------------------	---------------------

**Returns**

True if successful. It is very important to check this return code.

**6.29.2.91** `bool CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.SetSize ( CarbonEnum.Transaction.TXREQSize size )`

Sets the Size of the flit.

**Parameters**

<i>refParameter</i>	The Size to be set
---------------------	--------------------

**Returns**

True if successful. It is very important to check this return code.

**6.29.2.92** `bool CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.SetSize ( CarbonEnum.Transaction.RXREQSize size )`

Sets the Size of the flit.

**Parameters**

<i>refParameter</i>	The Size to be set
---------------------	--------------------

**Returns**

True if successful. It is very important to check this return code.

6.29.2.93 bool CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.SetSnpAttr ( Int64 *refParameter* )

Sets the SnpAttr of the flit.

## Parameters

<i>refParameter</i>	The SnpAttr to be set
---------------------	-----------------------

## Returns

True if successful. It is very important to check this return code.

#### 6.29.2.94 bool CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.SetSrcID ( Int64 *refParameter* )

Sets the SrcID of the flit.

## Parameters

<i>refParameter</i>	The SrcID to be set
---------------------	---------------------

## Returns

True if successful. It is very important to check this return code.

#### 6.29.2.95 bool CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.SetTgtID ( Int64 *refParameter* )

Sets the TgtID of the flit.

## Parameters

<i>refParameter</i>	The TgtID to be set
---------------------	---------------------

## Returns

True if successful. It is very important to check this return code.

#### 6.29.2.96 bool CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.SetTxnID ( Int64 *refParameter* )

Sets the TxnID of the flit.

## Parameters

<i>refParameter</i>	The TxnID to be set
---------------------	---------------------

## Returns

True if successful. It is very important to check this return code.

### 6.29.3 Property Documentation

#### 6.29.3.1 Int64 CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.Channel [get]

The particular channel that a flit is on. (convenience function since always valid)

#### 6.29.3.2 Int64 CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.Cycle [get]

Gets the cycle (convenience function since always valid). NYI

## 6.29.3.3 Int64 CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.FlitID [get]

The Flit ID of this flit

## 6.29.3.4 Int64 CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.ID [get]

The ID of this Flit

## 6.29.3.5 Int64 CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.TransactionID [get]

Returns the ID of the CHI Transaction (convenience function since always valid).

## 6.29.3.6 Int64 CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit.UserField [get], [set]

UserField that can be retrieved and set.

The documentation for this interface was generated from the following file:

- [ICHITransactionFlit.cs](#)

## 6.30 CarbonAnalyzerAPI.Interfaces.ICHITransactionFlits Interface Reference

The interface to the collection of CHITransactionFlits.

### Public Member Functions

- `IEnumerable< ICHITransactionFlit > Items ()`  
*The collection of CHITransactionFlits.*
- `IEnumerable< ICHITransactionFlit > Items (CycleRange crange)`  
*The collection of CHITransactionFlits for this range.*
- `IEnumerable< ICHITransactionFlit > Items (CycleRange crange, CarbonEnum.Transaction.Channel channel)`  
*The collection of CHITransactionFlits for this range that are on this channel.*
- `IEnumerable< ICHITransactionFlit > DataItems ()`  
*The collection of CHITransactionFlits that are data flits.*
- `IEnumerable< ICHITransactionFlit > ReqItems ()`  
*The collection of CHITransactionFlits that are requests.*
- `Int64 MaxFlitCycle ()`  
*Maximum Flit Cycle on this Transaction.*
- `Int64 MinFlitCycle ()`  
*Minimum Flit Cycle on this transaction.*
- `Int64 FirstDATFlitCycle ()`  
*The first DATA flit cycle for this transaction. Returns 0 if none.*
- `Int64 LastDATFlitCycle ()`  
*The last DATA flit cycle for this transaction. Returns 0 if none.*
- `ICHITransactionFlit AddTXREQ (UInt64 cycle, UInt64 qos, UInt64 tgtID, UInt64 srcID, UInt64 txnid, CarbonEnum.Transaction.TXREQOpcode opcode, CarbonEnum.Transaction.TXRSPRespErr respErr, CarbonEnum.Transaction.TXREQSize size, UInt64 Addr, UInt64 NS, UInt64 LikelyShared, UInt64 DynPCrd, UInt64 Order, UInt64 PCrdType, UInt64 MemAttr, UInt64 SnpAttr, UInt64 LPID, UInt64 Excl, UInt64 ExpCompAck, UInt64 RSVDC, CarbonEnum.Transaction.REQOpcodeType reqOpcodeType)`

- [ICHITransactionFlit AddRXREQ](#) (UInt64 cycle, UInt64 qos, UInt64 tgtID, UInt64 srcID, UInt64 txnid, CarbonEnum.Transaction.RXREQOpcode opcode, CarbonEnum.Transaction.RXRSPRespErr respErr, CarbonEnum.Transaction.RXREQSize size, UInt64 Addr, UInt64 NS, UInt64 LikelyShared, UInt64 DynPCrd, UInt64 Order, UInt64 PCrdType, UInt64 MemAttr, UInt64 SnpAttr, UInt64 LPID, UInt64 Excl, UInt64 ExpCompAck, UInt64 RSVDC, CarbonEnum.Transaction.REQOpcodeType reqOpcodeType)
- [ICHITransactionFlit AddTXRSP](#) (UInt64 cycle, UInt64 qos, UInt64 tgtID, UInt64 srcID, UInt64 txnid, CarbonEnum.Transaction.TXRSPOpcode opcode, CarbonEnum.Transaction.TXRSPRespErr respErr, UInt64 Resp, UInt64 DBID, UInt64 PCrdType)
- [ICHITransactionFlit AddRXRSP](#) (UInt64 cycle, UInt64 qos, UInt64 tgtID, UInt64 srcID, UInt64 txnid, CarbonEnum.Transaction.RXRSPOpcode opcode, CarbonEnum.Transaction.RXRSPRespErr respErr, UInt64 Resp, UInt64 DBID, UInt64 PCrdType)
- [ICHITransactionFlit AddTXSNP](#) (UInt64 cycle, UInt64 qos, UInt64 tgtID, UInt64 srcID, UInt64 txnid, CarbonEnum.Transaction.TXSNPOpcode opcode, CarbonEnum.Transaction.TXRSPRespErr respErr, UInt64 Addr, UInt64 NS)
- [ICHITransactionFlit AddRXSNP](#) (UInt64 cycle, UInt64 qos, UInt64 tgtID, UInt64 srcID, UInt64 txnid, CarbonEnum.Transaction.RXSNPOpcode opcode, CarbonEnum.Transaction.RXRSPRespErr respErr, UInt64 Addr, UInt64 NS)
- [ICHITransactionFlit AddTXDAT](#) (UInt64 cycle, UInt64 qos, UInt64 tgtID, UInt64 srcID, UInt64 txnid, CarbonEnum.Transaction.TXDATOpcode opcode, CarbonEnum.Transaction.TXRSPRespErr respErr, UInt64 Resp, UInt64 DBID, UInt64 CCID, UInt64 DataID, UInt64 RSVDC, UInt64 BE, UInt64 Data, UInt64 Data2, UInt64 Data4, UInt64 Data6, UInt64 Data8, UInt64 Data10, UInt64 Data12, UInt64 Data14)
- [ICHITransactionFlit AddRXDAT](#) (UInt64 cycle, UInt64 qos, UInt64 tgtID, UInt64 srcID, UInt64 txnid, CarbonEnum.Transaction.RXDATOpcode opcode, CarbonEnum.Transaction.RXRSPRespErr respErr, UInt64 Resp, UInt64 DBID, UInt64 CCID, UInt64 DataID, UInt64 RSVDC, UInt64 BE, UInt64 Data, UInt64 Data2, UInt64 Data4, UInt64 Data6, UInt64 Data8, UInt64 Data10, UInt64 Data12, UInt64 Data14)

### 6.30.1 Detailed Description

The interface to the collection of CHITransactionFlits.

### 6.30.2 Member Function Documentation

- 6.30.2.1 [ICHITransactionFlit CarbonAnalyzerAPI.Interfaces.ICHITransactionFlits.AddRXDAT](#) ( UInt64 cycle, UInt64 qos, UInt64 tgtID, UInt64 srcID, UInt64 txnid, CarbonEnum.Transaction.RXDATOpcode opcode, CarbonEnum.Transaction.RXRSPRespErr respErr, UInt64 Resp, UInt64 DBID, UInt64 CCID, UInt64 DataID, UInt64 RSVDC, UInt64 BE, UInt64 Data, UInt64 Data2, UInt64 Data4, UInt64 Data6, UInt64 Data8, UInt64 Data10, UInt64 Data12, UInt64 Data14 )
- 6.30.2.2 [ICHITransactionFlit CarbonAnalyzerAPI.Interfaces.ICHITransactionFlits.AddRXREQ](#) ( UInt64 cycle, UInt64 qos, UInt64 tgtID, UInt64 srcID, UInt64 txnid, CarbonEnum.Transaction.RXREQOpcode opcode, CarbonEnum.Transaction.RXRSPRespErr respErr, CarbonEnum.Transaction.RXREQSize size, UInt64 Addr, UInt64 NS, UInt64 LikelyShared, UInt64 DynPCrd, UInt64 Order, UInt64 PCrdType, UInt64 MemAttr, UInt64 SnpAttr, UInt64 LPID, UInt64 Excl, UInt64 ExpCompAck, UInt64 RSVDC, CarbonEnum.Transaction.REQOpcodeType reqOpcodeType )
- 6.30.2.3 [ICHITransactionFlit CarbonAnalyzerAPI.Interfaces.ICHITransactionFlits.AddRXRSP](#) ( UInt64 cycle, UInt64 qos, UInt64 tgtID, UInt64 srcID, UInt64 txnid, CarbonEnum.Transaction.RXRSPOpcode opcode, CarbonEnum.Transaction.RXRSPRespErr respErr, UInt64 Resp, UInt64 DBID, UInt64 PCrdType )
- 6.30.2.4 [ICHITransactionFlit CarbonAnalyzerAPI.Interfaces.ICHITransactionFlits.AddRXSNP](#) ( UInt64 cycle, UInt64 qos, UInt64 tgtID, UInt64 srcID, UInt64 txnid, CarbonEnum.Transaction.RXSNPOpcode opcode, CarbonEnum.Transaction.RXRSPRespErr respErr, UInt64 Addr, UInt64 NS )

- 6.30.2.5 **ICHITransactionFlit** CarbonAnalyzerAPI.Interfaces.ICHITransactionFlits.AddTXDAT ( UInt64 *cycle*, UInt64 *qos*, UInt64 *tgtID*, UInt64 *srcID*, UInt64 *txnID*, CarbonEnum.Transaction.TXDATOpcode *opcode*, CarbonEnum.Transaction.TXRSPRespErr *respErr*, UInt64 *Resp*, UInt64 *DBID*, UInt64 *CCID*, UInt64 *DataID*, UInt64 *RSVDC*, UInt64 *BE*, UInt64 *Data*, UInt64 *Data2*, UInt64 *Data4*, UInt64 *Data6*, UInt64 *Data8*, UInt64 *Data10*, UInt64 *Data12*, UInt64 *Data14* )
- 6.30.2.6 **ICHITransactionFlit** CarbonAnalyzerAPI.Interfaces.ICHITransactionFlits.AddTXREQ ( UInt64 *cycle*, UInt64 *qos*, UInt64 *tgtID*, UInt64 *srcID*, UInt64 *txnID*, CarbonEnum.Transaction.TXREQOpcode *opcode*, CarbonEnum.Transaction.TXRSPRespErr *respErr*, CarbonEnum.Transaction.TXREQSize *size*, UInt64 *Addr*, UInt64 *NS*, UInt64 *LikelyShared*, UInt64 *DynPCrd*, UInt64 *Order*, UInt64 *PCrdType*, UInt64 *MemAttr*, UInt64 *SnpAttr*, UInt64 *LPID*, UInt64 *Excl*, UInt64 *ExpCompAck*, UInt64 *RSVDC*, CarbonEnum.Transaction.REQOpcodeType *reqOpcodeType* )
- 6.30.2.7 **ICHITransactionFlit** CarbonAnalyzerAPI.Interfaces.ICHITransactionFlits.AddTXRSP ( UInt64 *cycle*, UInt64 *qos*, UInt64 *tgtID*, UInt64 *srcID*, UInt64 *txnID*, CarbonEnum.Transaction.TXRSPOpcode *opcode*, CarbonEnum.Transaction.TXRSPRespErr *respErr*, UInt64 *Resp*, UInt64 *DBID*, UInt64 *PCrdType* )
- 6.30.2.8 **ICHITransactionFlit** CarbonAnalyzerAPI.Interfaces.ICHITransactionFlits.AddTXSNP ( UInt64 *cycle*, UInt64 *qos*, UInt64 *tgtID*, UInt64 *srcID*, UInt64 *txnID*, CarbonEnum.Transaction.TXSNPOpcode *opcode*, CarbonEnum.Transaction.TXRSPRespErr *respErr*, UInt64 *Addr*, UInt64 *NS* )
- 6.30.2.9 **IEnumerable<ICHITransactionFlit>** CarbonAnalyzerAPI.Interfaces.ICHITransactionFlits.DataItems ( )

The collection of CHITransactionFlits that are data flits.

Returns

- 6.30.2.10 **Int64** CarbonAnalyzerAPI.Interfaces.ICHITransactionFlits.FirstDATFlitCycle ( )

The first DATA flit cycle for this transaction. Returns 0 if none.

Returns

- 6.30.2.11 **IEnumerable<ICHITransactionFlit>** CarbonAnalyzerAPI.Interfaces.ICHITransactionFlits.Items ( )

The collection of CHITransactionFlits.

Returns

Returns the collection of CHITransactionFlits.

- 6.30.2.12 **IEnumerable<ICHITransactionFlit>** CarbonAnalyzerAPI.Interfaces.ICHITransactionFlits.Items ( **CycleRange** *crange* )

The collection of CHITransactionFlits for this range.

Parameters

<i>crange</i>	
---------------	--

Returns

6.30.2.13 `IEnumerable<ICHITransactionFlit> CarbonAnalyzerAPI.Interfaces.ICHITransactionFlits.Items ( CycleRange crange, CarbonEnum.Transaction.Channel channel )`

The collection of CHITransactionFlits for this range that are on this channel.



## Parameters

<i>crange</i>	
<i>channel</i>	

## Returns

## 6.30.2.14 Int64 CarbonAnalyzerAPI.Interfaces.ICHITransactionFlits.LastDATFlitCycle ( )

The last DATA flit cycle for this transaction. Returns 0 if none.

## Returns

## 6.30.2.15 Int64 CarbonAnalyzerAPI.Interfaces.ICHITransactionFlits.MaxFlitCycle ( )

Maximum Flit Cycle on this Transaction.

## Returns

## 6.30.2.16 Int64 CarbonAnalyzerAPI.Interfaces.ICHITransactionFlits.MinFlitCycle ( )

Minimum Flit Cycle on this transaction.

## Returns

## 6.30.2.17 IEnumerable&lt;ICHITransactionFlit&gt; CarbonAnalyzerAPI.Interfaces.ICHITransactionFlits.ReqItems ( )

The collection of CHITransactionFlits that are requests.

## Returns

The documentation for this interface was generated from the following file:

- [ICHITransactionFlits.cs](#)

## 6.31 CarbonAnalyzerAPI.Interfaces.ICHITransactions Interface Reference

The interface to the collection of CHITransactions.

## Public Member Functions

- `IEnumerable< ICHITransaction > Items (CycleRange range)`  
*The collection of CHITransactions returned for a particular range.*
- `ICHITransaction FindByTransactionID (Int64 id)`  
*Find a transaction by this ID*
- `ICHITransaction Add ()`  
*Add a chi transaction with this XactionID.*
- `Int64 UniqueTransactionsCount ()`  
*How many unique transactions are on a particular CHI connection.*
- `Int64 FlitsOnChannelCount (Int64 channel)`  
*Returns the number of flits on a particular channel.*

### 6.31.1 Detailed Description

The interface to the collection of CHITransactions.

### 6.31.2 Member Function Documentation

#### 6.31.2.1 `ICHITransaction CarbonAnalyzerAPI.Interfaces.ICHITransactions.Add ( )`

Add a chi transaction with this XactionID.

Parameters

<i>xactionID</i>	
------------------	--

Returns

#### 6.31.2.2 `ICHITransaction CarbonAnalyzerAPI.Interfaces.ICHITransactions.FindByTransactionID ( Int64 id )`

Find a transaction by this ID

Parameters

<i>id</i>	
-----------	--

Returns

#### 6.31.2.3 `Int64 CarbonAnalyzerAPI.Interfaces.ICHITransactions.FlitsOnChannelCount ( Int64 channel )`

Returns the number of flits on a particular channel.

Parameters

<i>channel</i>	The particular channel that we want the number of flits for
----------------	---

Returns

The count of the number of flits on the specified channel.

#### 6.31.2.4 IEnumerable<ICHITransaction> CarbonAnalyzerAPI.Interfaces.ICHITransactions.Items ( CycleRange *range* )

The collection of CHITransctions returned for a particular range.

**Parameters**

<i>range</i>	The range of CHITransactions to return.
--------------	---

**Returns**

Returns the collection of CHITransactions within the specified range.

**6.31.2.5 Int64 CarbonAnalyzerAPI.Interfaces.ICHITransactions.UniqueTransactionsCount ( )**

How many unique transactions are on a particular CHI connection.

**Returns**

The number of unique transactions on this connection.

The documentation for this interface was generated from the following file:

- [ICHITransactions.cs](#)

**6.32 CarbonAnalyzerAPI.Interfaces.IComponent Interface Reference**

The interface to each component.

**Public Member Functions**

- [IComponentParameter AddParameter](#) (string name, string parameterValue, bool isReadOnly, bool isPrivate, bool isRunTime)

*Add a parameter to this component.*

**Properties**

- Int64 [ID](#) [get]  
*The internal ID of this component.*
- string [FullName](#) [get, set]  
*The full hierarchical name of the component in the original design. e.g. A9-MP1-PL301.AHBv2LiteToAHBv2ss*
- string [Name](#) [get, set]  
*The name of the component in the original design. e.g. AHBv2LiteToAHBv2ss*
- string [Model](#) [get, set]  
*The model for this component. e.g. AHBv2LiteToAHBv2SS*
- string [Type](#) [get, set]  
*The component type. e.g. Adapter*
- [IComponentParameters ComponentParameters](#) [get]  
*The collection of the components parameters.*

**6.32.1 Detailed Description**

The interface to each component.

## 6.32.2 Member Function Documentation

### 6.32.2.1 IComponentParameter CarbonAnalyzerAPI.Interfaces.IComponent.AddParameter ( string *name*, string *parameterValue*, bool *isReadOnly*, bool *isPrivate*, bool *isRunTime* )

Add a parameter to this component.

**Parameters**

<i>name</i>	The parameter name
<i>parameterValue</i>	The value of the parameter
<i>isReadOnly</i>	whether readonly
<i>isPrivate</i>	whether private
<i>isRunTime</i>	whether runtime only

**Returns**

Returns the newly added parameter.

**6.32.3 Property Documentation****6.32.3.1 IComponentParameters CarbonAnalyzerAPI.Interfaces.IComponent.ComponentParameters** [get]

The collection of the components parameters.

**6.32.3.2 string CarbonAnalyzerAPI.Interfaces.IComponent.FullName** [get], [set]

The full hierarchical name of the component in the original design. e.g. A9-MP1-PL301.AHBv2LiteToAHBv2ss

**6.32.3.3 Int64 CarbonAnalyzerAPI.Interfaces.IComponent.ID** [get]

The internal ID of this component.

**6.32.3.4 string CarbonAnalyzerAPI.Interfaces.IComponent.Model** [get], [set]

The model for this component. e.g. AHBv2LiteToAHBv2SS

**6.32.3.5 string CarbonAnalyzerAPI.Interfaces.IComponent.Name** [get], [set]

The name of the component in the original design. e.g. AHBv2LiteToAHBv2ss

**6.32.3.6 string CarbonAnalyzerAPI.Interfaces.IComponent.Type** [get], [set]

The component type. e.g. Adapter

The documentation for this interface was generated from the following file:

- [IComponent.cs](#)

**6.33 CarbonAnalyzerAPI.Interfaces.IComponentParameter Interface Reference**

The interface to each component parameter.

**Properties**

- string [Name](#) [get, set]  
The name of this parameter
- Int64 [ID](#) [get]

*The internal ID associated with this component parameter.*

- string [Value](#) [get, set]

*The value of the parameter.*

- bool [ReadOnly](#) [get, set]

*Boolean indicating whether this parameter is read only.*

- bool [Private](#) [get, set]

*Boolean indicating whether this parameter is private.*

- bool [RunTime](#) [get, set]

*Boolean indicating whether this parameter is a runtime only parameter.*

### 6.33.1 Detailed Description

The interface to each component parameter.

### 6.33.2 Property Documentation

#### 6.33.2.1 Int64 CarbonAnalyzerAPI.Interfaces.IComponentParameter.ID [get]

The internal ID associated with this component parameter.

#### 6.33.2.2 string CarbonAnalyzerAPI.Interfaces.IComponentParameter.Name [get], [set]

The name of this parameter

#### 6.33.2.3 bool CarbonAnalyzerAPI.Interfaces.IComponentParameter.Private [get], [set]

Boolean indicating whether this parameter is private.

#### 6.33.2.4 bool CarbonAnalyzerAPI.Interfaces.IComponentParameter.ReadOnly [get], [set]

Boolean indicating whether this parameter is read only.

#### 6.33.2.5 bool CarbonAnalyzerAPI.Interfaces.IComponentParameter.RunTime [get], [set]

Boolean indicating whether this parameter is a runtime only parameter.

#### 6.33.2.6 string CarbonAnalyzerAPI.Interfaces.IComponentParameter.Value [get], [set]

The value of the parameter.

The documentation for this interface was generated from the following file:

- [IComponentParameter.cs](#)

## 6.34 CarbonAnalyzerAPI.Interfaces.IComponentParameters Interface Reference

The interface to the collection of component parameters.

## Properties

- [IComponentParameter this\[int index\]](#) [get]  
Gets the *ComponentParameter* by the indicated index.
- [IComponentParameter this\[string index\]](#) [get]  
Gets the *IComponentParameter* by the indicated name.
- int [Length](#) [get]  
The number of component parameters in this collection.

### 6.34.1 Detailed Description

The interface to the collection of component parameters.

### 6.34.2 Property Documentation

#### 6.34.2.1 int CarbonAnalyzerAPI.Interfaces.IComponentParameters.Length [get]

The number of component parameters in this collection.

#### 6.34.2.2 IComponentParameter CarbonAnalyzerAPI.Interfaces.IComponentParameters.this[int index] [get]

Gets the *ComponentParameter* by the indicated index.

##### Parameters

<i>index</i>	The index of the component parameter.
--------------	---------------------------------------

##### Returns

Returns the *ComponentParameter* by the indicated index.

#### 6.34.2.3 IComponentParameter CarbonAnalyzerAPI.Interfaces.IComponentParameters.this[string index] [get]

Gets the *IComponentParameter* by the indicated name.

##### Parameters

<i>index</i>	The name of the componentParmaeter to return.
--------------	---

##### Returns

Returns the *IComponentParameter* by the indicated name.

The documentation for this interface was generated from the following file:

- [IComponentParameters.cs](#)

## 6.35 CarbonAnalyzerAPI.Interfaces.IComponents Interface Reference

The interface to the collection of components.



## Public Member Functions

- [IComponent Add](#) (string fullName, string name, string model, string componentType)  
*Add a component.*

## Properties

- [IComponent this\[int index\]](#) [get]  
*Gets the Component by the indicated index.*
- [IComponent this\[string index\]](#) [get]  
*Gets the Component by the indicated name.*
- int [Length](#) [get]  
*The number of components in this collection.*

### 6.35.1 Detailed Description

The interface to the collection of components.

### 6.35.2 Member Function Documentation

#### 6.35.2.1 IComponent CarbonAnalyzerAPI.Interfaces.IComponents.Add ( string fullName, string name, string model, string componentType )

Add a component.

##### Parameters

<i>fullName</i>	The full hierarchical name of the component.
<i>name</i>	The name of the component.
<i>model</i>	The name of the model associated with this component.
<i>componentType</i>	The type of the component e.g. CPU

##### Returns

Returns the newly added component.

### 6.35.3 Property Documentation

#### 6.35.3.1 int CarbonAnalyzerAPI.Interfaces.IComponents.Length [get]

The number of components in this collection.

#### 6.35.3.2 IComponent CarbonAnalyzerAPI.Interfaces.IComponents.this[int index] [get]

Gets the Component by the indicated index.

##### Parameters

<i>index</i>	The index of the component to return.
--------------	---------------------------------------

##### Returns

Returns the component by the indicated index.

### 6.35.3.3 IComponent CarbonAnalyzerAPI.Interfaces.IComponents.this[string index] [get]

Gets the Component by the indicated name.

## Parameters

<i>index</i>	The name of the component to return.
--------------	--------------------------------------

## Returns

Returns the component by the indicated name.

The documentation for this interface was generated from the following file:

- [IComponents.cs](#)

## 6.36 CarbonAnalyzerAPI.Interfaces.IDataSet Interface Reference

The interface to a particular DataSet.

## Properties

- string [Name](#) [get]  
*The name of this DataSet.*

### 6.36.1 Detailed Description

The interface to a particular DataSet.

### 6.36.2 Property Documentation

#### 6.36.2.1 string CarbonAnalyzerAPI.Interfaces.IDataSet.Name [get]

The name of this DataSet.

The documentation for this interface was generated from the following file:

- [IDataSet.cs](#)

## 6.37 CarbonAnalyzerAPI.Interfaces.IFunctionStream Interface Reference

The interface to a particular FunctionStream.

## Properties

- string [Name](#) [get, set]  
*Alias for SourceName*
- string [StreamName](#) [get, set]  
*The stream name. e.g. CortexA9MP function stream*
- string [SourceName](#) [get, set]  
*The source of this stream. e.g. CortexA9MP.core0*
- string [DesignName](#) [get, set]  
*The original design name. e.g. A9-MP1-PL301*
- Int64 [Events](#) [get, set]

*The number of events.*

- [IFunctionTraces Traces](#) [get]

*The collection of traces associated with this stream.*

- [ISimulationWindows SimulationWindows](#) [get]

*The collection of simulation windows associated with this stream.*

- [UInt64 TotalWindowCycles](#) [get]

*The total cycles this stream is active.*

### 6.37.1 Detailed Description

The interface to a particular FunctionStream.

### 6.37.2 Property Documentation

**6.37.2.1** `string CarbonAnalyzerAPI.Interfaces.IFunctionStream.DesignName` [get], [set]

The original design name. e.g. A9-MP1-PL301

**6.37.2.2** `Int64 CarbonAnalyzerAPI.Interfaces.IFunctionStream.Events` [get], [set]

The number of events.

**6.37.2.3** `string CarbonAnalyzerAPI.Interfaces.IFunctionStream.Name` [get], [set]

Alias for SourceName

**6.37.2.4** `ISimulationWindows CarbonAnalyzerAPI.Interfaces.IFunctionStream.SimulationWindows` [get]

The collection of simulation windows associated with this stream.

**6.37.2.5** `string CarbonAnalyzerAPI.Interfaces.IFunctionStream.SourceName` [get], [set]

The source of this stream. e.g. CortexA9MP.core0

**6.37.2.6** `string CarbonAnalyzerAPI.Interfaces.IFunctionStream.StreamName` [get], [set]

The stream name. e.g. CortexA9MP function stream

**6.37.2.7** `UInt64 CarbonAnalyzerAPI.Interfaces.IFunctionStream.TotalWindowCycles` [get]

The total cycles this stream is active.

**6.37.2.8** `IFunctionTraces CarbonAnalyzerAPI.Interfaces.IFunctionStream.Traces` [get]

The collection of traces associated with this stream.

The documentation for this interface was generated from the following file:

- [IFunctionStream.cs](#)

## 6.38 CarbonAnalyzerAPI.Interfaces.IFunctionStreams Interface Reference

The interface to the collection of FunctionStreams.

### Public Member Functions

- [IFunctionStream Add](#) (string streamName, string sourceName, string designName)  
*Add a function stream.*

### Properties

- [IFunctionStream this\[int index\]](#) [get]  
*Returns the FunctionStream at the indicated index.*
- [IFunctionStream this\[string index\]](#) [get]  
*Returns the FunctionStream by the specified name.*
- int [Length](#) [get]  
*The number of IFunctionStreams in this collection.*

### 6.38.1 Detailed Description

The interface to the collection of FunctionStreams.

### 6.38.2 Member Function Documentation

#### 6.38.2.1 IFunctionStream CarbonAnalyzerAPI.Interfaces.IFunctionStreams.Add ( string streamName, string sourceName, string designName )

Add a function stream.

##### Parameters

<i>streamName</i>	The name of the stream to add.
<i>sourceName</i>	The source of this data. e.g. CortexA9MP.core0
<i>designName</i>	The original design name that this data was produced from. e.g. A9-MP1-PL301

##### Returns

Returns the newly added FunctionStream.

### 6.38.3 Property Documentation

#### 6.38.3.1 int CarbonAnalyzerAPI.Interfaces.IFunctionStreams.Length [get]

The number of [IFunctionStreams](#) in this collection.

#### 6.38.3.2 IFunctionStream CarbonAnalyzerAPI.Interfaces.IFunctionStreams.this[int index] [get]

Returns the FunctionStream at the indicated index.

## Parameters

<i>index</i>	The index of the FunctionStream.
--------------	----------------------------------

## Returns

Returns the FunctionStream at the indicated index.

### 6.38.3.3 IFunctionStream CarbonAnalyzerAPI.Interfaces.IFunctionStreams.this[string index] [get]

Returns the FunctionStream by the specified name.

## Parameters

<i>index</i>	The name of the FunctionStream.
--------------	---------------------------------

## Returns

Returns the FunctionStream by the specified name.

The documentation for this interface was generated from the following file:

- [IFunctionStreams.cs](#)

## 6.39 CarbonAnalyzerAPI.Interfaces.IFunctionTrace Interface Reference

The interface to each FunctionTrace.

## Properties

- Int64 [Cycle](#) [get, set]  
*The cycle number of this trace.*
- string [FunctionName](#) [get, set]  
*The function name associated with this trace. e.g. Abort\_Handler*
- Int64 [PC](#) [get, set]  
*The PC for this trace. e.g. 7748*
- [TraceType](#) Type [get, set]  
*The type of this trace. Valid types are TraceType.Call or TraceType.Return*

### 6.39.1 Detailed Description

The interface to each FunctionTrace.

### 6.39.2 Property Documentation

#### 6.39.2.1 Int64 CarbonAnalyzerAPI.Interfaces.IFunctionTrace.Cycle [get], [set]

The cycle number of this trace.

#### 6.39.2.2 string CarbonAnalyzerAPI.Interfaces.IFunctionTrace.FunctionName [get], [set]

The function name associated with this trace. e.g. Abort\_Handler

## 6.39.2.3 Int64 CarbonAnalyzerAPI.Interfaces.IFunctionTrace.PC [get], [set]

The PC for this trace. e.g. 7748

## 6.39.2.4 TraceType CarbonAnalyzerAPI.Interfaces.IFunctionTrace.Type [get], [set]

The type of this trace. Valid types are TraceType.Call or TraceType.Return

The documentation for this interface was generated from the following file:

- [IFunctionTrace.cs](#)

## 6.40 CarbonAnalyzerAPI.Interfaces.IFunctionTraces Interface Reference

The interface to the collection of FunctionTraces.

### Public Member Functions

- IEnumerable< [IFunctionTrace](#) > [Values](#) ([CycleRange](#) range)  
*The collection of values on the FunctionTrace*
- [IFunctionTrace Add](#) (Int64 cycle, string functionName, Int64 pc, [TraceType](#) traceType)  
*Add a new FunctionTrace*

### 6.40.1 Detailed Description

The interface to the collection of FunctionTraces.

### 6.40.2 Member Function Documentation

#### 6.40.2.1 IFunctionTrace CarbonAnalyzerAPI.Interfaces.IFunctionTraces.Add ( Int64 cycle, string functionName, Int64 pc, TraceType traceType )

Add a new FunctionTrace

##### Parameters

<i>cycle</i>	Cycle number of the trace.
<i>functionName</i>	FunctionName of the trace
<i>pc</i>	PC of this trace.
<i>traceType</i>	The particular traceType. e.g. TraceType.Call or TraceType.Return

##### Returns

Returns the newly added FunctionTrace.

#### 6.40.2.2 IEnumerable<IFunctionTrace> CarbonAnalyzerAPI.Interfaces.IFunctionTraces.Values ( CycleRange range )

The collection of values on the FunctionTrace

## Parameters

<i>range</i>	The range of values to retrieve.
--------------	----------------------------------

## Returns

Returns the collection of values on the FunctionTrace.

The documentation for this interface was generated from the following file:

- [IFunctionTraces.cs](#)

## 6.41 CarbonAnalyzerAPI.Interfaces.IMetaData Interface Reference

The interface to each MetaData object.

## Properties

- Int64 [ID](#) [get]  
*The internal ID of this MetaData.*
- Int64 [Version](#) [get]  
*The version of this MetaData.*
- string [DesignName](#) [get]  
*The Design Name of this MetaData*
- DateTime [CreatedOn](#) [get]  
*The date this MetaData was created.*
- Int64 [SimulationCycles](#) [get]  
*The number of simulation cycles of this MetaData.*

### 6.41.1 Detailed Description

The interface to each MetaData object.

### 6.41.2 Property Documentation

#### 6.41.2.1 DateTime CarbonAnalyzerAPI.Interfaces.IMetaData.CreatedOn [get]

The date this MetaData was created.

#### 6.41.2.2 string CarbonAnalyzerAPI.Interfaces.IMetaData.DesignName [get]

The Design Name of this MetaData

#### 6.41.2.3 Int64 CarbonAnalyzerAPI.Interfaces.IMetaData.ID [get]

The internal ID of this MetaData.

#### 6.41.2.4 Int64 CarbonAnalyzerAPI.Interfaces.IMetaData.SimulationCycles [get]

The number of simulation cycles of this MetaData.



#### 6.41.2.5 Int64 CarbonAnalyzerAPI.Interfaces.IMetaData.Version [get]

The version of this MetaData.

The documentation for this interface was generated from the following file:

- [IMetaData.cs](#)

## 6.42 CarbonAnalyzerAPI.Interfaces.INamedObject Interface Reference

### Properties

- string [Name](#) [get, set]

#### 6.42.1 Property Documentation

##### 6.42.1.1 string CarbonAnalyzerAPI.Interfaces.INamedObject.Name [get], [set]

The documentation for this interface was generated from the following file:

- [IAnalyzer.cs](#)

## 6.43 CarbonAnalyzerAPI.Interfaces.IProtection Interface Reference

The interface to the Protection associated with a particular transaction.

### Properties

- bool [Ins](#) [get, set]  
*This bit indicates whether the transaction is an instruction access or a data access.*
- bool [Priv](#) [get, set]  
*An AXI master might support more than one level of operating privilege, and extend this concept of privilege to memory access. AxPROT[0] identifies an access as unprivileged or privileged.*
- bool [Secure](#) [get, set]  
*An AXI master might support Secure and Non-secure operating states, and extend this concept of security to memory access. AxPROT[1] identifies an access as Secure or Non-secure.*

#### 6.43.1 Detailed Description

The interface to the Protection associated with a particular transaction.

#### 6.43.2 Property Documentation

##### 6.43.2.1 bool CarbonAnalyzerAPI.Interfaces.IProtection.Ins [get], [set]

This bit indicates whether the transaction is an instruction access or a data access.

##### 6.43.2.2 bool CarbonAnalyzerAPI.Interfaces.IProtection.Priv [get], [set]

An AXI master might support more than one level of operating privilege, and extend this concept of privilege to memory access. AxPROT[0] identifies an access as unprivileged or privileged.

#### 6.43.2.3 bool CarbonAnalyzerAPI.Interfaces.IProtection.Secure [get], [set]

An AXI master might support Secure and Non-secure operating states, and extend this concept of security to memory access. AxPROT[1] identifies an access as Secure or Non-secure.

The documentation for this interface was generated from the following file:

- [IProtection.cs](#)

## 6.44 CarbonAnalyzerAPI.Interfaces.ISimulationWindow Interface Reference

The interface to each CapiStreamSimulationWindow.

### Properties

- Int64 [ID](#) [get]  
*The internal ID associated with this SimulationWindow.*
- Int64 [StartCycle](#) [get]  
*Start cycle of this SimulationWindow.*
- Int64 [EndCycle](#) [get]  
*End cycle of this SimulationWindow.*

### 6.44.1 Detailed Description

The interface to each CapiStreamSimulationWindow.

### 6.44.2 Property Documentation

#### 6.44.2.1 Int64 CarbonAnalyzerAPI.Interfaces.ISimulationWindow.EndCycle [get]

End cycle of this SimulationWindow.

#### Returns

End cycle

#### 6.44.2.2 Int64 CarbonAnalyzerAPI.Interfaces.ISimulationWindow.ID [get]

The internal ID associated with this SimulationWindow.

#### 6.44.2.3 Int64 CarbonAnalyzerAPI.Interfaces.ISimulationWindow.StartCycle [get]

Start cycle of this SimulationWindow.

#### Returns

Start cycle

The documentation for this interface was generated from the following file:

- [ISimulationWindow.cs](#)

## 6.45 CarbonAnalyzerAPI.Interfaces.ISimulationWindows Interface Reference

The interface to the collection of CapiStreamSimulationWindows.

### Properties

- [ISimulationWindow this\[int index\]](#) [get]  
*Gets the ICapiStreamSimulationWindow by the indicated index.*
- [int Length](#) [get]  
*The number of ICapiStreamSimulationWindows.*

### 6.45.1 Detailed Description

The interface to the collection of CapiStreamSimulationWindows.

### 6.45.2 Property Documentation

#### 6.45.2.1 [int CarbonAnalyzerAPI.Interfaces.ISimulationWindows.Length](#) [get]

The number of ICapiStreamSimulationWindows.

#### 6.45.2.2 [ISimulationWindow CarbonAnalyzerAPI.Interfaces.ISimulationWindows.this\[int index\]](#) [get]

Gets the ICapiStreamSimulationWindow by the indicated index.

##### Parameters

<i>index</i>	Which CapiStreamSimulationWindow to return.
--------------	---

##### Returns

Returns the CapiStreamSimulationWindow by the indicated index.

The documentation for this interface was generated from the following file:

- [ISimulationWindows.cs](#)

## 6.46 CarbonAnalyzerAPI.Interfaces.ITransactionStream Interface Reference

The interface to each TransactionStream.

### Properties

- [string Name](#) [get, set]  
*Alias for SourceName*
- [string StreamName](#) [get, set]  
*The name of the stream.*
- [string SourceName](#) [get, set]  
*The source component or connection that is providing data for the stream.*
- [string DesignName](#) [get, set]  
*The name of the design that the stream originated from.*

- string [SubType](#) [get, set]  
*The type of the Stream. e.g. AXI4*
- Int64 [Events](#) [get, set]  
*The number of events on the stream.*
- Int64 [BusBitWidth](#) [get, set]  
*The width on this particular bus*
- [IAXIv2Transactions](#) [AXIv2Transactions](#) [get]  
*The collection of AXIv2Transactions on the stream.*
- [IAXI4Transactions](#) [AXI4Transactions](#) [get]  
*The collection of AXI4Transactions on the stream.*
- [IAXI4ACETransactions](#) [AXI4ACETransactions](#) [get]  
*The collection of AXI4ACETransactions on the stream.*
- [ICHITransactions](#) [CHITransactions](#) [get]  
*The collection of CHITransactions on the stream.*
- [ISimulationWindows](#) [SimulationWindows](#) [get]  
*The collection of simulation windows associated with this stream.*
- UInt64 [TotalWindowCycles](#) [get]  
*The total cycles this stream is active.*

### 6.46.1 Detailed Description

The interface to each TransactionStream.

### 6.46.2 Property Documentation

#### 6.46.2.1 [IAXI4ACETransactions](#) [CarbonAnalyzerAPI.Interfaces.ITransactionStream.AXI4ACETransactions](#) [get]

The collection of AXI4ACETransactions on the stream.

#### 6.46.2.2 [IAXI4Transactions](#) [CarbonAnalyzerAPI.Interfaces.ITransactionStream.AXI4Transactions](#) [get]

The collection of AXI4Transactions on the stream.

#### 6.46.2.3 [IAXIv2Transactions](#) [CarbonAnalyzerAPI.Interfaces.ITransactionStream.AXIv2Transactions](#) [get]

The collection of AXIv2Transactions on the stream.

#### 6.46.2.4 [Int64](#) [CarbonAnalyzerAPI.Interfaces.ITransactionStream.BusBitWidth](#) [get], [set]

The width on this particular bus

#### 6.46.2.5 [ICHITransactions](#) [CarbonAnalyzerAPI.Interfaces.ITransactionStream.CHITransactions](#) [get]

The collection of CHITransactions on the stream.

#### 6.46.2.6 [string](#) [CarbonAnalyzerAPI.Interfaces.ITransactionStream.DesignName](#) [get], [set]

The name of the design that the stream originated from.

6.46.2.7 `Int64 CarbonAnalyzerAPI.Interfaces.ITransactionStream.Events` `[get], [set]`

The number of events on the stream.

6.46.2.8 `string CarbonAnalyzerAPI.Interfaces.ITransactionStream.Name` `[get], [set]`

Alias for SourceName

6.46.2.9 `ISimulationWindows CarbonAnalyzerAPI.Interfaces.ITransactionStream.SimulationWindows` `[get]`

The collection of simulation windows associated with this stream.

6.46.2.10 `string CarbonAnalyzerAPI.Interfaces.ITransactionStream.SourceName` `[get], [set]`

The source component or connection that is providing data for the stream.

6.46.2.11 `string CarbonAnalyzerAPI.Interfaces.ITransactionStream.StreamName` `[get], [set]`

The name of the stream.

6.46.2.12 `string CarbonAnalyzerAPI.Interfaces.ITransactionStream.SubType` `[get], [set]`

The type of the Stream. e.g. AXI4

6.46.2.13 `UInt64 CarbonAnalyzerAPI.Interfaces.ITransactionStream.TotalWindowCycles` `[get]`

The total cycles this stream is active.

The documentation for this interface was generated from the following file:

- [ITransactionStream.cs](#)

## 6.47 CarbonAnalyzerAPI.Interfaces.ITransactionStreams Interface Reference

The collection of TransactionStreams.

### Public Member Functions

- [ITransactionStream Add](#) ([TransactionStreamTypes](#) streamType, string sourceName, Int64 busBitWidth)  
*This method is used to add a particular TransactionStream.*
- [ITransactionStream Add](#) ([TransactionStreamTypes](#) streamType, string sourceName)

### Properties

- [ITransactionStream this\[int index\]](#) `[get]`  
*Gets the TransactionStream at the indicated index.*
- [ITransactionStream this\[string index\]](#) `[get]`  
*Returns the TransactionStream of the specified name.*
- `int Length` `[get]`  
*The number of transaction streams in the collection.*

### 6.47.1 Detailed Description

The collection of TransactionStreams.

### 6.47.2 Member Function Documentation

#### 6.47.2.1 ITransactionStream CarbonAnalyzerAPI.Interfaces.ITransactionStreams.Add ( TransactionStreamTypes *streamType*, string *sourceName*, Int64 *busBitWidth* )

This method is used to add a particular TransactionStream.

##### Parameters

<i>streamType</i>	The streamType. e.g. TransactionStreamTypes.AXI , .AXI4, CHI, or .AXI4ACE
<i>sourceName</i>	The source that the stream originated from.
<i>busBitWidth</i>	Bus Bit Width

##### Returns

Returns the newly added TransactionStream.

#### 6.47.2.2 ITransactionStream CarbonAnalyzerAPI.Interfaces.ITransactionStreams.Add ( TransactionStreamTypes *streamType*, string *sourceName* )

### 6.47.3 Property Documentation

#### 6.47.3.1 int CarbonAnalyzerAPI.Interfaces.ITransactionStreams.Length [get]

The number of transaction streams in the collection.

#### 6.47.3.2 ITransactionStream CarbonAnalyzerAPI.Interfaces.ITransactionStreams.this[int index] [get]

Gets the TransactionStream at the indicated index.

##### Parameters

<i>index</i>	The index of the transaction stream.
--------------	--------------------------------------

##### Returns

Returns the TransactionStream at the indicated index.

#### 6.47.3.3 ITransactionStream CarbonAnalyzerAPI.Interfaces.ITransactionStreams.this[string index] [get]

Returns the TransactionStream of the specified name.

##### Parameters

<i>index</i>	The name of the transaction stream.
--------------	-------------------------------------

##### Returns

Returns the transaction stream of the specified name.

The documentation for this interface was generated from the following file:

- [ITransactionStreams.cs](#)

## Chapter 7

# File Documentation

### 7.1 CycleRange.cs File Reference

#### Classes

- class [CarbonAnalyzerAPI.CycleRange](#)  
*The interface to a [CycleRange](#) Class*

#### Namespaces

- package [CarbonAnalyzerAPI](#)

### 7.2 IAnalyzer.cs File Reference

#### Classes

- interface [CarbonAnalyzerAPI.Interfaces.INamedObject](#)
- interface [CarbonAnalyzerAPI.Interfaces.IAnalyzer](#)  
*The top level interface to the Analyzer.*

#### Namespaces

- package [CarbonAnalyzerAPI.Interfaces](#)  
*The namespace associated with all interfaces.*

### 7.3 IAXI4ACETransaction.cs File Reference

#### Classes

- interface [CarbonAnalyzerAPI.Interfaces.IAXI4ACETransaction](#)  
*The interface to an AXI4ACETransaction*

#### Namespaces

- package [CarbonAnalyzerAPI.Interfaces](#)  
*The namespace associated with all interfaces.*

## 7.4 IAXI4ACETransactionBeat.cs File Reference

### Classes

- interface [CarbonAnalyzerAPI.Interfaces.IAXI4ACETransactionBeat](#)  
*The interface to each AXI4ACETransactionBeat.*

### Namespaces

- package [CarbonAnalyzerAPI.Interfaces](#)  
*The namespace associated with all interfaces.*

## 7.5 IAXI4ACETransactionBeats.cs File Reference

### Classes

- interface [CarbonAnalyzerAPI.Interfaces.IAXI4ACETransactionBeats](#)  
*The interface to the collection of AXI4ACETransactionBeats.*

### Namespaces

- package [CarbonAnalyzerAPI.Interfaces](#)  
*The namespace associated with all interfaces.*

## 7.6 IAXI4ACETransactions.cs File Reference

### Classes

- interface [CarbonAnalyzerAPI.Interfaces.IAXI4ACETransactions](#)  
*The interface to the collection of AXI4ACETransactions.*

### Namespaces

- package [CarbonAnalyzerAPI.Interfaces](#)  
*The namespace associated with all interfaces.*

## 7.7 IAXI4Transaction.cs File Reference

### Classes

- interface [CarbonAnalyzerAPI.Interfaces.IAXI4Transaction](#)  
*The interface to each AXI4Transaction.*

### Namespaces

- package [CarbonAnalyzerAPI.Interfaces](#)  
*The namespace associated with all interfaces.*



## 7.8 IAXI4TransactionBeat.cs File Reference

### Classes

- interface [CarbonAnalyzerAPI.Interfaces.IAXI4TransactionBeat](#)  
*The interface to each AXI4TransactionBeat.*

### Namespaces

- package [CarbonAnalyzerAPI.Interfaces](#)  
*The namespace associated with all interfaces.*

## 7.9 IAXI4TransactionBeats.cs File Reference

### Classes

- interface [CarbonAnalyzerAPI.Interfaces.IAXI4TransactionBeats](#)  
*The interface to the collection of AXI4TransactionBeats.*

### Namespaces

- package [CarbonAnalyzerAPI.Interfaces](#)  
*The namespace associated with all interfaces.*

## 7.10 IAXI4Transactions.cs File Reference

### Classes

- interface [CarbonAnalyzerAPI.Interfaces.IAXI4Transactions](#)  
*The interface to the collection of AXI4Transactions.*

### Namespaces

- package [CarbonAnalyzerAPI.Interfaces](#)  
*The namespace associated with all interfaces.*

## 7.11 IAXIv2Transaction.cs File Reference

### Classes

- interface [CarbonAnalyzerAPI.Interfaces.IAXIv2Transaction](#)  
*The interface to each AXIv2Transaction.*

### Namespaces

- package [CarbonAnalyzerAPI.Interfaces](#)  
*The namespace associated with all interfaces.*

## 7.12 IAXlv2TransactionBeat.cs File Reference

### Classes

- interface [CarbonAnalyzerAPI.Interfaces.IAXlv2TransactionBeat](#)  
*The interface to each AXlv2TransactionBeat.*

### Namespaces

- package [CarbonAnalyzerAPI.Interfaces](#)  
*The namespace associated with all interfaces.*

## 7.13 IAXlv2TransactionBeats.cs File Reference

### Classes

- interface [CarbonAnalyzerAPI.Interfaces.IAXlv2TransactionBeats](#)  
*The interface to the collection of AXlv2TransactionBeats.*

### Namespaces

- package [CarbonAnalyzerAPI.Interfaces](#)  
*The namespace associated with all interfaces.*

## 7.14 IAXlv2Transactions.cs File Reference

### Classes

- interface [CarbonAnalyzerAPI.Interfaces.IAXlv2Transactions](#)  
*The interface to the collection of AXlv2Transactions.*

### Namespaces

- package [CarbonAnalyzerAPI.Interfaces](#)  
*The namespace associated with all interfaces.*

## 7.15 ICache.cs File Reference

### Classes

- interface [CarbonAnalyzerAPI.Interfaces.ICache](#)  
*This interface applies to transactions and can be used to find out if the transaction is bufferable, cacheable, or whether write or read allocation is mandatory.*

### Namespaces

- package [CarbonAnalyzerAPI.Interfaces](#)  
*The namespace associated with all interfaces.*

## 7.16 ICapiDataCorrelatedValue.cs File Reference

### Classes

- interface [CarbonAnalyzerAPI.Interfaces.ICapiDataCorrelatedValue](#)  
*The interface to event data for each cycle.*

### Namespaces

- package [CarbonAnalyzerAPI.Interfaces](#)  
*The namespace associated with all interfaces.*

## 7.17 ICapiDataCorrelatedValues.cs File Reference

### Classes

- interface [CarbonAnalyzerAPI.Interfaces.ICapiDataCorrelatedValues](#)  
*The interface to the collection of CapiDataCorrelatedValues.*

### Namespaces

- package [CarbonAnalyzerAPI.Interfaces](#)  
*The namespace associated with all interfaces.*

## 7.18 ICapiDataNumericValue.cs File Reference

### Classes

- interface [CarbonAnalyzerAPI.Interfaces.ICapiDataNumericValue](#)  
*The interface to event data for each cycle.*

### Namespaces

- package [CarbonAnalyzerAPI.Interfaces](#)  
*The namespace associated with all interfaces.*

## 7.19 ICapiDataNumericValues.cs File Reference

### Classes

- interface [CarbonAnalyzerAPI.Interfaces.ICapiDataNumericValues](#)  
*The interface to the collection of CapiDataNumericValues.*

### Namespaces

- package [CarbonAnalyzerAPI.Interfaces](#)  
*The namespace associated with all interfaces.*

## 7.20 ICapiDataSymbolValue.cs File Reference

### Classes

- interface [CarbonAnalyzerAPI.Interfaces.ICapiDataSymbolValue](#)  
*The interface to assess the number of times particular event values occur. Applies only on channels that are of type symbol.*

### Namespaces

- package [CarbonAnalyzerAPI.Interfaces](#)  
*The namespace associated with all interfaces.*

## 7.21 ICapiDataSymbolValues.cs File Reference

### Classes

- interface [CarbonAnalyzerAPI.Interfaces.ICapiDataSymbolValues](#)  
*The interface to the collection of CapiDataSymbolValues.*

### Namespaces

- package [CarbonAnalyzerAPI.Interfaces](#)  
*The namespace associated with all interfaces.*

## 7.22 ICapiStream.cs File Reference

### Classes

- interface [CarbonAnalyzerAPI.Interfaces.ICapiStream](#)  
*The interface to each capi stream.*

### Namespaces

- package [CarbonAnalyzerAPI.Interfaces](#)  
*The namespace associated with all interfaces.*

## 7.23 ICapiStreamChannel.cs File Reference

### Classes

- interface [CarbonAnalyzerAPI.Interfaces.ICapiStreamChannel](#)  
*The interface to each CapiStreamChannel.*

### Namespaces

- package [CarbonAnalyzerAPI.Interfaces](#)  
*The namespace associated with all interfaces.*

## Enumerations

- enum [CarbonAnalyzerAPI.Interfaces.ChannelTypes](#) { [CarbonAnalyzerAPI.Interfaces.ChannelTypes.Symbol](#), [CarbonAnalyzerAPI.Interfaces.ChannelTypes.Numeric](#) }  
*The enumerated type indicating the type of a particular channel.*

## 7.24 ICapiStreamChannels.cs File Reference

### Classes

- interface [CarbonAnalyzerAPI.Interfaces.ICapiStreamChannels](#)  
*The interface to the collection of CapiStreamChannels.*

### Namespaces

- package [CarbonAnalyzerAPI.Interfaces](#)  
*The namespace associated with all interfaces.*

## 7.25 ICapiStreamChannelSymbol.cs File Reference

### Classes

- interface [CarbonAnalyzerAPI.Interfaces.ICapiStreamChannelSymbol](#)  
*The interface to each CapiStreamChannelSymbol*

### Namespaces

- package [CarbonAnalyzerAPI.Interfaces](#)  
*The namespace associated with all interfaces.*

## 7.26 ICapiStreamChannelSymbols.cs File Reference

### Classes

- interface [CarbonAnalyzerAPI.Interfaces.ICapiStreamChannelSymbols](#)  
*The interface to the collection of CapiStreamChannelSymbols.*

### Namespaces

- package [CarbonAnalyzerAPI.Interfaces](#)  
*The namespace associated with all interfaces.*

## 7.27 ICapiStreams.cs File Reference

### Classes

- interface [CarbonAnalyzerAPI.Interfaces.ICapiStreams](#)  
*The interface to the collection of CapiStreams.*

## Namespaces

- package [CarbonAnalyzerAPI.Interfaces](#)  
*The namespace associated with all interfaces.*

## 7.28 ICHITransaction.cs File Reference

### Classes

- interface [CarbonAnalyzerAPI.Interfaces.ICHITransaction](#)  
*The interface to each CHITransaction.*

## Namespaces

- package [CarbonAnalyzerAPI.Interfaces](#)  
*The namespace associated with all interfaces.*

## 7.29 ICHITransactionFlit.cs File Reference

### Classes

- interface [CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit](#)  
*The interface to each CHITransactionFlit.*

## Namespaces

- package [CarbonAnalyzerAPI.Interfaces](#)  
*The namespace associated with all interfaces.*

## 7.30 ICHITransactionFlits.cs File Reference

### Classes

- interface [CarbonAnalyzerAPI.Interfaces.ICHITransactionFlits](#)  
*The interface to the collection of CHITransactionFlits.*

## Namespaces

- package [CarbonAnalyzerAPI.Interfaces](#)  
*The namespace associated with all interfaces.*

## 7.31 ICHITransactions.cs File Reference

### Classes

- interface [CarbonAnalyzerAPI.Interfaces.ICHITransactions](#)  
*The interface to the collection of CHITransactions.*

## Namespaces

- package [CarbonAnalyzerAPI.Interfaces](#)  
*The namespace associated with all interfaces.*

## 7.32 IComponent.cs File Reference

### Classes

- interface [CarbonAnalyzerAPI.Interfaces.IComponent](#)  
*The interface to each component.*

## Namespaces

- package [CarbonAnalyzerAPI.Interfaces](#)  
*The namespace associated with all interfaces.*

## 7.33 IComponentParameter.cs File Reference

### Classes

- interface [CarbonAnalyzerAPI.Interfaces.IComponentParameter](#)  
*The interface to each component parameter.*

## Namespaces

- package [CarbonAnalyzerAPI.Interfaces](#)  
*The namespace associated with all interfaces.*

## 7.34 IComponentParameters.cs File Reference

### Classes

- interface [CarbonAnalyzerAPI.Interfaces.IComponentParameters](#)  
*The interface to the collection of component parameters.*

## Namespaces

- package [CarbonAnalyzerAPI.Interfaces](#)  
*The namespace associated with all interfaces.*

## 7.35 IComponents.cs File Reference

### Classes

- interface [CarbonAnalyzerAPI.Interfaces.IComponents](#)  
*The interface to the collection of components.*

## Namespaces

- package [CarbonAnalyzerAPI.Interfaces](#)  
*The namespace associated with all interfaces.*

## 7.36 IDataset.cs File Reference

### Classes

- interface [CarbonAnalyzerAPI.Interfaces.IDataset](#)  
*The interface to a particular DataSet.*

## Namespaces

- package [CarbonAnalyzerAPI.Interfaces](#)  
*The namespace associated with all interfaces.*

## 7.37 IFunctionStream.cs File Reference

### Classes

- interface [CarbonAnalyzerAPI.Interfaces.IFunctionStream](#)  
*The interface to a particular FunctionStream.*

## Namespaces

- package [CarbonAnalyzerAPI.Interfaces](#)  
*The namespace associated with all interfaces.*

## 7.38 IFunctionStreams.cs File Reference

### Classes

- interface [CarbonAnalyzerAPI.Interfaces.IFunctionStreams](#)  
*The interface to the collection of FunctionStreams.*

## Namespaces

- package [CarbonAnalyzerAPI.Interfaces](#)  
*The namespace associated with all interfaces.*

## 7.39 IFunctionTrace.cs File Reference

### Classes

- interface [CarbonAnalyzerAPI.Interfaces.IFunctionTrace](#)  
*The interface to each FunctionTrace.*



## Namespaces

- package [CarbonAnalyzerAPI.Interfaces](#)  
*The namespace associated with all interfaces.*

## Enumerations

- enum [CarbonAnalyzerAPI.Interfaces.TraceType](#) { [CarbonAnalyzerAPI.Interfaces.TraceType.Call](#), [CarbonAnalyzerAPI.Interfaces.TraceType.Return](#) }  
*The particular TraceType. Applies to FunctionTraces.*

## 7.40 IFunctionTraces.cs File Reference

### Classes

- interface [CarbonAnalyzerAPI.Interfaces.IFunctionTraces](#)  
*The interface to the collection of FunctionTraces.*

## Namespaces

- package [CarbonAnalyzerAPI.Interfaces](#)  
*The namespace associated with all interfaces.*

## 7.41 IMetaData.cs File Reference

### Classes

- interface [CarbonAnalyzerAPI.Interfaces.IMetaData](#)  
*The interface to each MetaData object.*

## Namespaces

- package [CarbonAnalyzerAPI.Interfaces](#)  
*The namespace associated with all interfaces.*

## 7.42 IProtection.cs File Reference

### Classes

- interface [CarbonAnalyzerAPI.Interfaces.IProtection](#)  
*The interface to the Protection associated with a particular transaction.*

## Namespaces

- package [CarbonAnalyzerAPI.Interfaces](#)  
*The namespace associated with all interfaces.*

## 7.43 ISimulationWindow.cs File Reference

### Classes

- interface [CarbonAnalyzerAPI.Interfaces.ISimulationWindow](#)  
*The interface to each CapiStreamSimulationWindow.*

### Namespaces

- package [CarbonAnalyzerAPI.Interfaces](#)  
*The namespace associated with all interfaces.*

## 7.44 ISimulationWindows.cs File Reference

### Classes

- interface [CarbonAnalyzerAPI.Interfaces.ISimulationWindows](#)  
*The interface to the collection of CapiStreamSimulationWindows.*

### Namespaces

- package [CarbonAnalyzerAPI.Interfaces](#)  
*The namespace associated with all interfaces.*

## 7.45 ITransactionStream.cs File Reference

### Classes

- interface [CarbonAnalyzerAPI.Interfaces.ITransactionStream](#)  
*The interface to each TransactionStream.*

### Namespaces

- package [CarbonAnalyzerAPI.Interfaces](#)  
*The namespace associated with all interfaces.*

## 7.46 ITransactionStreams.cs File Reference

### Classes

- interface [CarbonAnalyzerAPI.Interfaces.ITransactionStreams](#)  
*The collection of TransactionStreams.*

### Namespaces

- package [CarbonAnalyzerAPI.Interfaces](#)  
*The namespace associated with all interfaces.*

## Enumerations

- enum `CarbonAnalyzerAPI.Interfaces.TransactionStreamTypes` { `CarbonAnalyzerAPI.Interfaces.TransactionStreamTypes.AXI`, `CarbonAnalyzerAPI.Interfaces.TransactionStreamTypes.AXI4`, `CarbonAnalyzerAPI.Interfaces.TransactionStreamTypes.AXI4ACE`, `CarbonAnalyzerAPI.Interfaces.TransactionStreamTypes.CHI` }

*The transaction types that are available specified when adding a `TransactionStream`.*

# Index

- AXI
  - CarbonAnalyzerAPI::Interfaces, [12](#)
- AXI4
  - CarbonAnalyzerAPI::Interfaces, [12](#)
- AXI4ACE
  - CarbonAnalyzerAPI::Interfaces, [12](#)
- AXI4ACETransactions
  - CarbonAnalyzerAPI::Interfaces::ITransaction-Stream, [114](#)
- AXI4Transactions
  - CarbonAnalyzerAPI::Interfaces::ITransaction-Stream, [114](#)
- AXIv2Transactions
  - CarbonAnalyzerAPI::Interfaces::ITransaction-Stream, [114](#)
- Add
  - CarbonAnalyzerAPI::Interfaces::IAXI4ACETransaction-Beats, [22](#)
  - CarbonAnalyzerAPI::Interfaces::IAXI4ACETransactions, [23](#)
  - CarbonAnalyzerAPI::Interfaces::IAXI4Transaction-Beats, [30](#)
  - CarbonAnalyzerAPI::Interfaces::IAXI4Transactions, [32](#)
  - CarbonAnalyzerAPI::Interfaces::IAXIv2Transaction-Beats, [39](#)
  - CarbonAnalyzerAPI::Interfaces::IAXIv2Transactions, [40](#)
  - CarbonAnalyzerAPI::Interfaces::ICapiStreams, [54](#)
  - CarbonAnalyzerAPI::Interfaces::ICHITransactions, [96](#)
  - CarbonAnalyzerAPI::Interfaces::IComponents, [103](#)
  - CarbonAnalyzerAPI::Interfaces::IFunctionStreams, [107](#)
  - CarbonAnalyzerAPI::Interfaces::IFunctionTraces, [109](#)
  - CarbonAnalyzerAPI::Interfaces::ITransaction-Streams, [116](#)
- AddChannel
  - CarbonAnalyzerAPI::Interfaces::ICapiStream, [46](#)
- AddParameter
  - CarbonAnalyzerAPI::Interfaces::IComponent, [99](#)
- AddRXDAT
  - CarbonAnalyzerAPI::Interfaces::ICHITransaction-Flits, [92](#)
- AddRXREQ
  - CarbonAnalyzerAPI::Interfaces::ICHITransaction-Flits, [92](#)
- AddRXRSP
  - CarbonAnalyzerAPI::Interfaces::ICHITransaction-Flits, [92](#)
- AddRXSNP
  - CarbonAnalyzerAPI::Interfaces::ICHITransaction-Flits, [92](#)
- AddSymbol
  - CarbonAnalyzerAPI::Interfaces::ICapiStream-Channel, [48](#)
- AddTXDAT
  - CarbonAnalyzerAPI::Interfaces::ICHITransaction-Flits, [92](#)
- AddTXREQ
  - CarbonAnalyzerAPI::Interfaces::ICHITransaction-Flits, [93](#)
- AddTXRSP
  - CarbonAnalyzerAPI::Interfaces::ICHITransaction-Flits, [93](#)
- AddTXSNP
  - CarbonAnalyzerAPI::Interfaces::ICHITransaction-Flits, [93](#)
- AddValue
  - CarbonAnalyzerAPI::Interfaces::ICapiStream-Channel, [48](#)
- Address
  - CarbonAnalyzerAPI::Interfaces::IAXI4ACETransaction, [17](#)
  - CarbonAnalyzerAPI::Interfaces::IAXI4Transaction, [26](#)
  - CarbonAnalyzerAPI::Interfaces::IAXIv2Transaction, [35](#)
- AddressComplete
  - CarbonAnalyzerAPI::Interfaces::IAXI4ACETransaction, [17](#)
  - CarbonAnalyzerAPI::Interfaces::IAXI4Transaction, [26](#)
  - CarbonAnalyzerAPI::Interfaces::IAXIv2Transaction, [35](#)
- AddressStart
  - CarbonAnalyzerAPI::Interfaces::IAXI4ACETransaction, [18](#)
  - CarbonAnalyzerAPI::Interfaces::IAXI4Transaction, [26](#)
  - CarbonAnalyzerAPI::Interfaces::IAXIv2Transaction, [35](#)
- All
  - CarbonAnalyzerAPI::CycleRange, [14](#)
- AxBurst
  - CarbonAnalyzerAPI::Interfaces::IAXI4ACETransaction, [18](#)

- CarbonAnalyzerAPI::Interfaces::IAXI4Transaction, 26
- CarbonAnalyzerAPI::Interfaces::IAXIv2Transaction, 35
- AxLen
  - CarbonAnalyzerAPI::Interfaces::IAXIv2Transaction, 35
- AxLock
  - CarbonAnalyzerAPI::Interfaces::IAXI4ACETransaction, 18
  - CarbonAnalyzerAPI::Interfaces::IAXI4Transaction, 26
  - CarbonAnalyzerAPI::Interfaces::IAXIv2Transaction, 35
- AxSize
  - CarbonAnalyzerAPI::Interfaces::IAXI4ACETransaction, 18
  - CarbonAnalyzerAPI::Interfaces::IAXI4Transaction, 26
  - CarbonAnalyzerAPI::Interfaces::IAXIv2Transaction, 35
- BeatComplete
  - CarbonAnalyzerAPI::Interfaces::IAXI4ACETransaction-Beat, 21
  - CarbonAnalyzerAPI::Interfaces::IAXI4Transaction-Beat, 29
  - CarbonAnalyzerAPI::Interfaces::IAXIv2Transaction-Beat, 37
- BeatStart
  - CarbonAnalyzerAPI::Interfaces::IAXI4ACETransaction-Beat, 21
  - CarbonAnalyzerAPI::Interfaces::IAXI4Transaction-Beat, 29
  - CarbonAnalyzerAPI::Interfaces::IAXIv2Transaction-Beat, 37
- Bufferable
  - CarbonAnalyzerAPI::Interfaces::ICache, 41
- BusBitWidth
  - CarbonAnalyzerAPI::Interfaces::ITransactionStream, 114
- ByteEnableLength
  - CarbonAnalyzerAPI::Interfaces::IAXI4ACETransaction, 18
  - CarbonAnalyzerAPI::Interfaces::IAXI4Transaction, 26
  - CarbonAnalyzerAPI::Interfaces::IAXIv2Transaction, 35
- CHI
  - CarbonAnalyzerAPI::Interfaces, 12
- CHITransactions
  - CarbonAnalyzerAPI::Interfaces::ITransactionStream, 114
- Cache
  - CarbonAnalyzerAPI::Interfaces::IAXI4ACETransaction, 18
  - CarbonAnalyzerAPI::Interfaces::IAXI4Transaction, 26
  - CarbonAnalyzerAPI::Interfaces::IAXIv2Transaction, 35
  - Cacheable
    - CarbonAnalyzerAPI::Interfaces::ICache, 41
  - Call
    - CarbonAnalyzerAPI::Interfaces, 12
  - CapiStreamChannelID
    - CarbonAnalyzerAPI::Interfaces::ICapiStreamChannelSymbol, 53
  - CarbonAnalyzerAPI::Interfaces
    - AXI, 12
    - AXI4, 12
    - AXI4ACE, 12
    - CHI, 12
    - Call, 12
    - Numeric, 11
    - Return, 12
    - Symbol, 11
  - CarbonAnalyzerAPI, 9
  - CarbonAnalyzerAPI.CycleRange, 13
  - CarbonAnalyzerAPI.Interfaces, 9
  - CarbonAnalyzerAPI.Interfaces.IAXI4ACETransaction, 16
  - CarbonAnalyzerAPI.Interfaces.IAXI4ACETransaction-Beat, 20
  - CarbonAnalyzerAPI.Interfaces.IAXI4ACETransactionBeats, 22
  - CarbonAnalyzerAPI.Interfaces.IAXI4ACETransactions, 23
  - CarbonAnalyzerAPI.Interfaces.IAXI4Transaction, 24
  - CarbonAnalyzerAPI.Interfaces.IAXI4TransactionBeat, 29
  - CarbonAnalyzerAPI.Interfaces.IAXI4TransactionBeats, 30
  - CarbonAnalyzerAPI.Interfaces.IAXI4Transactions, 31
  - CarbonAnalyzerAPI.Interfaces.IAXIv2Transaction, 33
  - CarbonAnalyzerAPI.Interfaces.IAXIv2TransactionBeat, 37
  - CarbonAnalyzerAPI.Interfaces.IAXIv2TransactionBeats, 38
  - CarbonAnalyzerAPI.Interfaces.IAXIv2Transactions, 39
  - CarbonAnalyzerAPI.Interfaces.IAnalyzer, 14
  - CarbonAnalyzerAPI.Interfaces.ICHITransaction, 55
  - CarbonAnalyzerAPI.Interfaces.ICHITransactionFlit, 56
  - CarbonAnalyzerAPI.Interfaces.ICHITransactionFlits, 91
  - CarbonAnalyzerAPI.Interfaces.ICHITransactions, 95
  - CarbonAnalyzerAPI.Interfaces.ICache, 41
  - CarbonAnalyzerAPI.Interfaces.ICapiDataCorrelatedValue, 41
  - CarbonAnalyzerAPI.Interfaces.ICapiDataCorrelatedValues, 42
  - CarbonAnalyzerAPI.Interfaces.ICapiDataNumericValue, 43
  - CarbonAnalyzerAPI.Interfaces.ICapiDataNumericValues, 43
  - CarbonAnalyzerAPI.Interfaces.ICapiDataSymbolValue, 44

- CarbonAnalyzerAPI.Interfaces.ICapiDataSymbolValues, 45
- CarbonAnalyzerAPI.Interfaces.ICapiStream, 45
- CarbonAnalyzerAPI.Interfaces.ICapiStreamChannel, 47
- CarbonAnalyzerAPI.Interfaces.ICapiStreamChannel-Symbol, 52
- CarbonAnalyzerAPI.Interfaces.ICapiStreamChannel-Symbols, 53
- CarbonAnalyzerAPI.Interfaces.ICapiStreamChannels, 50
- CarbonAnalyzerAPI.Interfaces.ICapiStreams, 54
- CarbonAnalyzerAPI.Interfaces.IComponent, 98
- CarbonAnalyzerAPI.Interfaces.IComponentParameter, 100
- CarbonAnalyzerAPI.Interfaces.IComponentParameters, 101
- CarbonAnalyzerAPI.Interfaces.IComponents, 102
- CarbonAnalyzerAPI.Interfaces.IDataSet, 105
- CarbonAnalyzerAPI.Interfaces.IFunctionStream, 105
- CarbonAnalyzerAPI.Interfaces.IFunctionStreams, 107
- CarbonAnalyzerAPI.Interfaces.IFunctionTrace, 108
- CarbonAnalyzerAPI.Interfaces.IFunctionTraces, 109
- CarbonAnalyzerAPI.Interfaces.IMetaData, 110
- CarbonAnalyzerAPI.Interfaces.INamedObject, 111
- CarbonAnalyzerAPI.Interfaces.IProtection, 111
- CarbonAnalyzerAPI.Interfaces.ISimulationWindow, 112
- CarbonAnalyzerAPI.Interfaces.ISimulationWindows, 113
- CarbonAnalyzerAPI.Interfaces.ITransactionStream, 113
- CarbonAnalyzerAPI.Interfaces.ITransactionStreams, 115
- CarbonAnalyzerAPI::CycleRange
  - All, 14
  - CycleRange, 14
  - End, 14
  - FromBeginning, 14
  - FromTo, 14
  - FullRange, 14
  - SQL, 14
  - SpecifiedToEnd, 14
  - SpecifiedRange, 14
  - Start, 14
  - StartToRange, 14
  - ToEnding, 14
- CarbonAnalyzerAPI::Interfaces
  - ChannelTypes, 11
  - TraceType, 11
  - TransactionStreamTypes, 12
- CarbonAnalyzerAPI::Interfaces::IAXI4ACETransaction
  - Address, 17
  - AddressComplete, 17
  - AddressStart, 18
  - AxBurst, 18
  - AxLock, 18
  - AxSize, 18
  - ByteEnableLength, 18
  - Cache, 18
  - Command, 18
  - DataBeats, 18
  - DataLength, 18
  - DataWidth, 18
  - ID, 18
  - InterConnectID, 18
  - Length, 19
  - Protection, 19
  - QOS, 19
  - Region, 19
  - Response, 19
  - ResponseComplete, 19
  - ResponseStart, 19
  - StreamingWidth, 19
  - TID, 19
  - TransactionConnectionID, 19
  - TransactionLatency, 19
  - TransactionType, 20
  - TransactionsBeats, 19
  - UserAddress, 20
  - UserBitWidth, 20
  - UserResponse, 20
  - XactionID, 20
- CarbonAnalyzerAPI::Interfaces::IAXI4ACETransaction-Beat
  - BeatComplete, 21
  - BeatStart, 21
  - DataBeat, 21
  - DataHigh, 21
  - DataLow, 21
  - ID, 21
  - StrobeHigh, 21
  - StrobeLow, 21
  - TransactionID, 21
  - UserData, 21
- CarbonAnalyzerAPI::Interfaces::IAXI4ACETransaction-Beats
  - Add, 22
  - Items, 22, 23
- CarbonAnalyzerAPI::Interfaces::IAXI4ACETransactions
  - Add, 23
  - Items, 24
- CarbonAnalyzerAPI::Interfaces::IAXI4Transaction
  - Address, 26
  - AddressComplete, 26
  - AddressStart, 26
  - AxBurst, 26
  - AxLock, 26
  - AxSize, 26
  - ByteEnableLength, 26
  - Cache, 26
  - Command, 27
  - DataBeats, 27
  - DataLength, 27
  - DataWidth, 27
  - ID, 27
  - InterConnectID, 27
  - Length, 27
  - Protection, 27

- QOS, [27](#)
- Region, [27](#)
- Response, [27](#)
- ResponseComplete, [27](#)
- ResponseStart, [28](#)
- StreamingWidth, [28](#)
- TID, [28](#)
- TransactionConnectionID, [28](#)
- TransactionLatency, [28](#)
- TransactionsBeats, [28](#)
- UserAddress, [28](#)
- UserBitWidth, [28](#)
- UserResponse, [28](#)
- XactionID, [28](#)
- CarbonAnalyzerAPI::Interfaces::IAXI4TransactionBeat
  - BeatComplete, [29](#)
  - BeatStart, [29](#)
  - DataBeat, [29](#)
  - DataHigh, [29](#)
  - DataLow, [29](#)
  - ID, [30](#)
  - StrobeHigh, [30](#)
  - StrobeLow, [30](#)
  - TransactionID, [30](#)
  - UserData, [30](#)
- CarbonAnalyzerAPI::Interfaces::IAXI4TransactionBeats
  - Add, [30](#)
  - Items, [31](#)
- CarbonAnalyzerAPI::Interfaces::IAXI4Transactions
  - Add, [32](#)
  - Items, [33](#)
- CarbonAnalyzerAPI::Interfaces::IAXIv2Transaction
  - Address, [35](#)
  - AddressComplete, [35](#)
  - AddressStart, [35](#)
  - AxBurst, [35](#)
  - AxLen, [35](#)
  - AxLock, [35](#)
  - AxSize, [35](#)
  - ByteEnableLength, [35](#)
  - Cache, [35](#)
  - Command, [35](#)
  - DataBeats, [35](#)
  - DataLength, [36](#)
  - DataWidth, [36](#)
  - ID, [36](#)
  - InterConnectID, [36](#)
  - Protection, [36](#)
  - Response, [36](#)
  - ResponseComplete, [36](#)
  - ResponseStart, [36](#)
  - StreamingWidth, [36](#)
  - TID, [36](#)
  - TransactionConnectionID, [36](#)
  - TransactionsBeats, [36](#)
  - XactionID, [37](#)
- CarbonAnalyzerAPI::Interfaces::IAXIv2TransactionBeat
  - BeatComplete, [37](#)
  - BeatStart, [37](#)
  - DataBeat, [37](#)
  - DataHigh, [38](#)
  - DataLow, [38](#)
  - ID, [38](#)
  - StrobeHigh, [38](#)
  - StrobeLow, [38](#)
  - TransactionID, [38](#)
- CarbonAnalyzerAPI::Interfaces::IAXIv2TransactionBeats
  - Add, [39](#)
  - Items, [39](#)
- CarbonAnalyzerAPI::Interfaces::IAXIv2Transactions
  - Add, [40](#)
  - Items, [40](#)
- CarbonAnalyzerAPI::Interfaces::IAnalyzer
  - Components, [15](#)
  - CreateDatabase, [15](#)
  - FunctionStreams, [15](#)
  - MetaData, [16](#)
  - Open, [15](#)
  - ProfileStreams, [16](#)
  - TransactionStreams, [16](#)
- CarbonAnalyzerAPI::Interfaces::ICHITransaction
  - ID, [55](#)
  - TransactionConnectionID, [55](#)
  - TransactionID, [55](#)
  - TransactionsFlits, [56](#)
- CarbonAnalyzerAPI::Interfaces::ICHITransactionFlit
  - Channel, [90](#)
  - Cycle, [90](#)
  - FlitID, [90](#)
  - GetAddr, [60](#)
  - GetBE, [60](#)
  - GetCCID, [60](#)
  - GetChannel, [62](#)
  - GetCycle, [62](#)
  - GetDBID, [65](#)
  - GetData, [62](#)
  - GetData10, [62](#)
  - GetData12, [62](#)
  - GetData14, [64](#)
  - GetData2, [64](#)
  - GetData4, [64](#)
  - GetData6, [64](#)
  - GetData8, [64](#)
  - GetDataID, [65](#)
  - GetDynPCrd, [65](#)
  - GetExcl, [65](#)
  - GetExpCompAck, [65](#)
  - GetID, [67](#)
  - GetLPID, [67](#)
  - GetLikelyShared, [67](#)
  - GetMemAttr, [67](#)
  - GetNS, [67](#)
  - GetOpcode, [69](#), [70](#)
  - GetOrder, [71](#)
  - GetPCrdType, [71](#)

- GetQoS, 71
- GetREQOpcodeType, 73
- GetRSVDC, 74
- GetRawOpCode, 71
- GetRawResponse, 71
- GetRawResponseError, 73
- GetRawSize, 73
- GetResp, 73, 74
- GetRespErr, 74
- GetSize, 75
- GetSnpAttr, 75
- GetSrcID, 75
- GetTgtID, 76
- GetTransactionID, 76
- GetTxnID, 76
- ID, 91
- SetAddr, 76
- SetBE, 77
- SetCCID, 77
- SetChannel, 77
- SetCycle, 77
- SetDBID, 80
- SetData, 77
- SetData10, 79
- SetData12, 79
- SetData14, 79
- SetData2, 79
- SetData4, 79
- SetData6, 80
- SetData8, 80
- SetDataID, 80
- SetDynPCrd, 80
- SetExcl, 82
- SetExpCompAck, 82
- SetLPID, 82
- SetLikelyShared, 82
- SetMemAttr, 82
- SetNS, 84
- SetOpcode, 84–86
- SetOrder, 86
- SetPCrdType, 86
- SetQoS, 86
- SetREQOpcodeType, 87
- SetRSVDC, 88
- SetResp, 87
- SetRespErr, 87, 88
- SetSize, 88
- SetSnpAttr, 88
- SetSrcID, 90
- SetTgtID, 90
- SetTxnID, 90
- TransactionID, 91
- UserField, 91
- CarbonAnalyzerAPI::Interfaces::IChiTransactionFlits
  - AddRXDAT, 92
  - AddRXREQ, 92
  - AddRXRSP, 92
  - AddRXSNP, 92
  - AddTXDAT, 92
  - AddTXREQ, 93
  - AddTXRSP, 93
  - AddTXSNP, 93
  - DataItems, 93
  - FirstDATFlitCycle, 93
  - Items, 93
  - LastDATFlitCycle, 95
  - MaxFlitCycle, 95
  - MinFlitCycle, 95
  - ReqItems, 95
- CarbonAnalyzerAPI::Interfaces::IChiTransactions
  - Add, 96
  - FindByTransactionID, 96
  - FlitsOnChannelCount, 96
  - Items, 96
  - UniqueTransactionsCount, 98
- CarbonAnalyzerAPI::Interfaces::ICache
  - Bufferable, 41
  - Cacheable, 41
  - ReadAlloc, 41
  - WriteAlloc, 41
- CarbonAnalyzerAPI::Interfaces::ICapiDataCorrelated-Value
  - CycleNumber, 42
  - Value1, 42
  - Value2, 42
- CarbonAnalyzerAPI::Interfaces::ICapiDataCorrelated-Values
  - Values, 42
- CarbonAnalyzerAPI::Interfaces::ICapiDataNumeric-Value
  - CycleNumber, 43
  - Value, 43
- CarbonAnalyzerAPI::Interfaces::ICapiDataNumeric-Values
  - Values, 44
- CarbonAnalyzerAPI::Interfaces::ICapiDataSymbolValue
  - Count, 44
  - CycleNumber, 44
  - Value, 44
- CarbonAnalyzerAPI::Interfaces::ICapiDataSymbol-Values
  - Values, 45
- CarbonAnalyzerAPI::Interfaces::ICapiStream
  - AddChannel, 46
  - Channels, 46
  - CorrelatedValues, 46
  - Description, 46
  - ID, 47
  - Label, 47
  - Name, 47
  - SimulationWindows, 47
  - SourceInstance, 47
  - TotalWindowCycles, 47
- CarbonAnalyzerAPI::Interfaces::ICapiStreamChannel
  - AddSymbol, 48
  - AddValue, 48



- DataType, [49](#)
  - Description, [49](#)
  - Events, [49](#)
  - FlushValues, [49](#)
  - ID, [49](#)
  - MaxEventCycle, [49](#)
  - MinEventCycle, [49](#)
  - Name, [49](#)
  - NumericValues, [49](#)
  - SymbolValues, [50](#)
  - Symbols, [49](#)
  - Type, [50](#)
- CarbonAnalyzerAPI::Interfaces::ICapiStreamChannel-
  - Symbol
  - CapiStreamChannelID, [53](#)
  - ID, [53](#)
  - MaxEventCycle, [52](#)
  - MinEventCycle, [52](#)
  - Name, [53](#)
  - Value, [53](#)
- CarbonAnalyzerAPI::Interfaces::ICapiStreamChannel-
  - Symbols
  - Length, [53](#)
- CarbonAnalyzerAPI::Interfaces::ICapiStreamChannels
  - Length, [50](#)
- CarbonAnalyzerAPI::Interfaces::ICapiStreams
  - Add, [54](#)
  - Length, [54](#)
- CarbonAnalyzerAPI::Interfaces::IComponent
  - AddParameter, [99](#)
  - ComponentParameters, [100](#)
  - FullName, [100](#)
  - ID, [100](#)
  - Model, [100](#)
  - Name, [100](#)
  - Type, [100](#)
- CarbonAnalyzerAPI::Interfaces::IComponentParameter
  - ID, [101](#)
  - Name, [101](#)
  - Private, [101](#)
  - ReadOnly, [101](#)
  - RunTime, [101](#)
  - Value, [101](#)
- CarbonAnalyzerAPI::Interfaces::IComponentParameters
  - Length, [102](#)
- CarbonAnalyzerAPI::Interfaces::IComponents
  - Add, [103](#)
  - Length, [103](#)
- CarbonAnalyzerAPI::Interfaces::IDataSet
  - Name, [105](#)
- CarbonAnalyzerAPI::Interfaces::IFunctionStream
  - DesignName, [106](#)
  - Events, [106](#)
  - Name, [106](#)
  - SimulationWindows, [106](#)
  - SourceName, [106](#)
  - StreamName, [106](#)
  - TotalWindowCycles, [106](#)
  - Traces, [106](#)
- CarbonAnalyzerAPI::Interfaces::IFunctionStreams
  - Add, [107](#)
  - Length, [107](#)
- CarbonAnalyzerAPI::Interfaces::IFunctionTrace
  - Cycle, [108](#)
  - FunctionName, [108](#)
  - PC, [108](#)
  - Type, [109](#)
- CarbonAnalyzerAPI::Interfaces::IFunctionTraces
  - Add, [109](#)
  - Values, [109](#)
- CarbonAnalyzerAPI::Interfaces::IMetaData
  - CreatedOn, [110](#)
  - DesignName, [110](#)
  - ID, [110](#)
  - SimulationCycles, [110](#)
  - Version, [110](#)
- CarbonAnalyzerAPI::Interfaces::INamedObject
  - Name, [111](#)
- CarbonAnalyzerAPI::Interfaces::IProtection
  - Ins, [111](#)
  - Priv, [111](#)
  - Secure, [111](#)
- CarbonAnalyzerAPI::Interfaces::ISimulationWindow
  - EndCycle, [112](#)
  - ID, [112](#)
  - StartCycle, [112](#)
- CarbonAnalyzerAPI::Interfaces::ISimulationWindows
  - Length, [113](#)
- CarbonAnalyzerAPI::Interfaces::ITransactionStream
  - AXI4ACETransactions, [114](#)
  - AXI4Transactions, [114](#)
  - AXIv2Transactions, [114](#)
  - BusBitWidth, [114](#)
  - CHITransactions, [114](#)
  - DesignName, [114](#)
  - Events, [114](#)
  - Name, [115](#)
  - SimulationWindows, [115](#)
  - SourceName, [115](#)
  - StreamName, [115](#)
  - SubType, [115](#)
  - TotalWindowCycles, [115](#)
- CarbonAnalyzerAPI::Interfaces::ITransactionStreams
  - Add, [116](#)
  - Length, [116](#)
- Channel
  - CarbonAnalyzerAPI::Interfaces::ICHITransaction-
    - Flit, [90](#)
- ChannelTypes
  - CarbonAnalyzerAPI::Interfaces, [11](#)
- Channels
  - CarbonAnalyzerAPI::Interfaces::ICapiStream, [46](#)
- Command
  - CarbonAnalyzerAPI::Interfaces::IAXI4ACETransaction, [18](#)

- CarbonAnalyzerAPI::Interfaces::IAXI4Transaction, 27
- CarbonAnalyzerAPI::Interfaces::IAXIv2Transaction, 35
- ComponentParameters
  - CarbonAnalyzerAPI::Interfaces::IComponent, 100
- Components
  - CarbonAnalyzerAPI::Interfaces::IAnalyzer, 15
- CorrelatedValues
  - CarbonAnalyzerAPI::Interfaces::ICapiStream, 46
- Count
  - CarbonAnalyzerAPI::Interfaces::ICapiDataSymbol-Value, 44
- CreateDatabase
  - CarbonAnalyzerAPI::Interfaces::IAnalyzer, 15
- CreatedOn
  - CarbonAnalyzerAPI::Interfaces::IMetaData, 110
- Cycle
  - CarbonAnalyzerAPI::Interfaces::ICHITransaction-Flit, 90
  - CarbonAnalyzerAPI::Interfaces::IFunctionTrace, 108
- CycleNumber
  - CarbonAnalyzerAPI::Interfaces::ICapiDataCorrelated-Value, 42
  - CarbonAnalyzerAPI::Interfaces::ICapiDataNumeric-Value, 43
  - CarbonAnalyzerAPI::Interfaces::ICapiDataSymbol-Value, 44
- CycleRange
  - CarbonAnalyzerAPI::CycleRange, 14
- CycleRange.cs, 117
- DataBeat
  - CarbonAnalyzerAPI::Interfaces::IAXI4ACETransaction-Beat, 21
  - CarbonAnalyzerAPI::Interfaces::IAXI4Transaction-Beat, 29
  - CarbonAnalyzerAPI::Interfaces::IAXIv2Transaction-Beat, 37
- DataBeats
  - CarbonAnalyzerAPI::Interfaces::IAXI4ACETransaction, 18
  - CarbonAnalyzerAPI::Interfaces::IAXI4Transaction, 27
  - CarbonAnalyzerAPI::Interfaces::IAXIv2Transaction, 35
- DataHigh
  - CarbonAnalyzerAPI::Interfaces::IAXI4ACETransaction-Beat, 21
  - CarbonAnalyzerAPI::Interfaces::IAXI4Transaction-Beat, 29
  - CarbonAnalyzerAPI::Interfaces::IAXIv2Transaction-Beat, 38
- DataItems
  - CarbonAnalyzerAPI::Interfaces::ICHITransaction-Flits, 93
- DataLength
  - CarbonAnalyzerAPI::Interfaces::IAXI4ACETransaction, 18
  - CarbonAnalyzerAPI::Interfaces::IAXI4Transaction, 27
  - CarbonAnalyzerAPI::Interfaces::IAXIv2Transaction, 36
- DataLow
  - CarbonAnalyzerAPI::Interfaces::IAXI4ACETransaction-Beat, 21
  - CarbonAnalyzerAPI::Interfaces::IAXI4Transaction-Beat, 29
  - CarbonAnalyzerAPI::Interfaces::IAXIv2Transaction-Beat, 38
- DataType
  - CarbonAnalyzerAPI::Interfaces::ICapiStream-Channel, 49
- DataWidth
  - CarbonAnalyzerAPI::Interfaces::IAXI4ACETransaction, 18
  - CarbonAnalyzerAPI::Interfaces::IAXI4Transaction, 27
  - CarbonAnalyzerAPI::Interfaces::IAXIv2Transaction, 36
- Description
  - CarbonAnalyzerAPI::Interfaces::ICapiStream, 46
  - CarbonAnalyzerAPI::Interfaces::ICapiStream-Channel, 49
- DesignName
  - CarbonAnalyzerAPI::Interfaces::IFunctionStream, 106
  - CarbonAnalyzerAPI::Interfaces::IMetaData, 110
  - CarbonAnalyzerAPI::Interfaces::ITransaction-Stream, 114
- End
  - CarbonAnalyzerAPI::CycleRange, 14
- EndCycle
  - CarbonAnalyzerAPI::Interfaces::ISimulation-Window, 112
- Events
  - CarbonAnalyzerAPI::Interfaces::ICapiStream-Channel, 49
  - CarbonAnalyzerAPI::Interfaces::IFunctionStream, 106
  - CarbonAnalyzerAPI::Interfaces::ITransaction-Stream, 114
- FindByTransactionID
  - CarbonAnalyzerAPI::Interfaces::ICHITransactions, 96
- FirstDATFlitCycle
  - CarbonAnalyzerAPI::Interfaces::ICHITransaction-Flits, 93
- FlitID
  - CarbonAnalyzerAPI::Interfaces::ICHITransaction-Flit, 90
- FlitsOnChannelCount
  - CarbonAnalyzerAPI::Interfaces::ICHITransactions, 96

- FlushValues
  - CarbonAnalyzerAPI::Interfaces::ICapiStream-Channel, [49](#)
- FromBeginning
  - CarbonAnalyzerAPI::CycleRange, [14](#)
- FromTo
  - CarbonAnalyzerAPI::CycleRange, [14](#)
- FullName
  - CarbonAnalyzerAPI::Interfaces::IComponent, [100](#)
- FullRange
  - CarbonAnalyzerAPI::CycleRange, [14](#)
- FunctionName
  - CarbonAnalyzerAPI::Interfaces::IFunctionTrace, [108](#)
- FunctionStreams
  - CarbonAnalyzerAPI::Interfaces::IAnalyzer, [15](#)
- GetAddr
  - CarbonAnalyzerAPI::Interfaces::ICHITransaction-Flit, [60](#)
- GetBE
  - CarbonAnalyzerAPI::Interfaces::ICHITransaction-Flit, [60](#)
- GetCCID
  - CarbonAnalyzerAPI::Interfaces::ICHITransaction-Flit, [60](#)
- GetChannel
  - CarbonAnalyzerAPI::Interfaces::ICHITransaction-Flit, [62](#)
- GetCycle
  - CarbonAnalyzerAPI::Interfaces::ICHITransaction-Flit, [62](#)
- GetDBID
  - CarbonAnalyzerAPI::Interfaces::ICHITransaction-Flit, [65](#)
- GetData
  - CarbonAnalyzerAPI::Interfaces::ICHITransaction-Flit, [62](#)
- GetData10
  - CarbonAnalyzerAPI::Interfaces::ICHITransaction-Flit, [62](#)
- GetData12
  - CarbonAnalyzerAPI::Interfaces::ICHITransaction-Flit, [62](#)
- GetData14
  - CarbonAnalyzerAPI::Interfaces::ICHITransaction-Flit, [64](#)
- GetData2
  - CarbonAnalyzerAPI::Interfaces::ICHITransaction-Flit, [64](#)
- GetData4
  - CarbonAnalyzerAPI::Interfaces::ICHITransaction-Flit, [64](#)
- GetData6
  - CarbonAnalyzerAPI::Interfaces::ICHITransaction-Flit, [64](#)
- GetData8
  - CarbonAnalyzerAPI::Interfaces::ICHITransaction-Flit, [64](#)
- GetDataID
  - CarbonAnalyzerAPI::Interfaces::ICHITransaction-Flit, [65](#)
- GetDynPCrd
  - CarbonAnalyzerAPI::Interfaces::ICHITransaction-Flit, [65](#)
- GetExcl
  - CarbonAnalyzerAPI::Interfaces::ICHITransaction-Flit, [65](#)
- GetExpCompAck
  - CarbonAnalyzerAPI::Interfaces::ICHITransaction-Flit, [65](#)
- GetID
  - CarbonAnalyzerAPI::Interfaces::ICHITransaction-Flit, [67](#)
- GetLPID
  - CarbonAnalyzerAPI::Interfaces::ICHITransaction-Flit, [67](#)
- GetLikelyShared
  - CarbonAnalyzerAPI::Interfaces::ICHITransaction-Flit, [67](#)
- GetMemAttr
  - CarbonAnalyzerAPI::Interfaces::ICHITransaction-Flit, [67](#)
- GetNS
  - CarbonAnalyzerAPI::Interfaces::ICHITransaction-Flit, [67](#)
- GetOpcode
  - CarbonAnalyzerAPI::Interfaces::ICHITransaction-Flit, [69](#), [70](#)
- GetOrder
  - CarbonAnalyzerAPI::Interfaces::ICHITransaction-Flit, [71](#)
- GetPCrdType
  - CarbonAnalyzerAPI::Interfaces::ICHITransaction-Flit, [71](#)
- GetQoS
  - CarbonAnalyzerAPI::Interfaces::ICHITransaction-Flit, [71](#)
- GetREQOpcodeType
  - CarbonAnalyzerAPI::Interfaces::ICHITransaction-Flit, [73](#)
- GetRSVDC
  - CarbonAnalyzerAPI::Interfaces::ICHITransaction-Flit, [74](#)
- GetRawOpCode
  - CarbonAnalyzerAPI::Interfaces::ICHITransaction-Flit, [71](#)
- GetRawResponse
  - CarbonAnalyzerAPI::Interfaces::ICHITransaction-Flit, [71](#)
- GetRawResponseError
  - CarbonAnalyzerAPI::Interfaces::ICHITransaction-Flit, [73](#)
- GetRawSize
  - CarbonAnalyzerAPI::Interfaces::ICHITransaction-Flit, [73](#)
- GetResp

- CarbonAnalyzerAPI::Interfaces::ICHITransaction-Flit, [73](#), [74](#)
- GetRespErr
  - CarbonAnalyzerAPI::Interfaces::ICHITransaction-Flit, [74](#)
- GetSize
  - CarbonAnalyzerAPI::Interfaces::ICHITransaction-Flit, [75](#)
- GetSnpAttr
  - CarbonAnalyzerAPI::Interfaces::ICHITransaction-Flit, [75](#)
- GetSrcID
  - CarbonAnalyzerAPI::Interfaces::ICHITransaction-Flit, [75](#)
- GetTgtID
  - CarbonAnalyzerAPI::Interfaces::ICHITransaction-Flit, [76](#)
- GetTransactionID
  - CarbonAnalyzerAPI::Interfaces::ICHITransaction-Flit, [76](#)
- GetTxnID
  - CarbonAnalyzerAPI::Interfaces::ICHITransaction-Flit, [76](#)
- IAXI4ACETransaction.cs, [117](#)
- IAXI4ACETransactionBeat.cs, [118](#)
- IAXI4ACETransactionBeats.cs, [118](#)
- IAXI4ACETransactions.cs, [118](#)
- IAXI4Transaction.cs, [118](#)
- IAXI4TransactionBeat.cs, [119](#)
- IAXI4TransactionBeats.cs, [119](#)
- IAXI4Transactions.cs, [119](#)
- IAXLv2Transaction.cs, [119](#)
- IAXLv2TransactionBeat.cs, [120](#)
- IAXLv2TransactionBeats.cs, [120](#)
- IAXLv2Transactions.cs, [120](#)
- IAnalyzer.cs, [117](#)
- ICHITransaction.cs, [124](#)
- ICHITransactionFlit.cs, [124](#)
- ICHITransactionFlits.cs, [124](#)
- ICHITransactions.cs, [124](#)
- ICache.cs, [120](#)
- ICapiDataCorrelatedValue.cs, [121](#)
- ICapiDataCorrelatedValues.cs, [121](#)
- ICapiDataNumericValue.cs, [121](#)
- ICapiDataNumericValues.cs, [121](#)
- ICapiDataSymbolValue.cs, [122](#)
- ICapiDataSymbolValues.cs, [122](#)
- ICapiStream.cs, [122](#)
- ICapiStreamChannel.cs, [122](#)
- ICapiStreamChannelSymbol.cs, [123](#)
- ICapiStreamChannelSymbols.cs, [123](#)
- ICapiStreamChannels.cs, [123](#)
- ICapiStreams.cs, [123](#)
- IComponent.cs, [125](#)
- IComponentParameter.cs, [125](#)
- IComponentParameters.cs, [125](#)
- IComponents.cs, [125](#)
- ID
  - CarbonAnalyzerAPI::Interfaces::IAXI4ACETransaction, [18](#)
  - CarbonAnalyzerAPI::Interfaces::IAXI4ACETransaction-Beat, [21](#)
  - CarbonAnalyzerAPI::Interfaces::IAXI4Transaction, [27](#)
  - CarbonAnalyzerAPI::Interfaces::IAXI4Transaction-Beat, [30](#)
  - CarbonAnalyzerAPI::Interfaces::IAXLv2Transaction, [36](#)
  - CarbonAnalyzerAPI::Interfaces::IAXLv2Transaction-Beat, [38](#)
  - CarbonAnalyzerAPI::Interfaces::ICapiStream, [47](#)
  - CarbonAnalyzerAPI::Interfaces::ICapiStream-Channel, [49](#)
  - CarbonAnalyzerAPI::Interfaces::ICapiStream-ChannelSymbol, [53](#)
  - CarbonAnalyzerAPI::Interfaces::ICHITransaction, [55](#)
  - CarbonAnalyzerAPI::Interfaces::ICHITransaction-Flit, [91](#)
  - CarbonAnalyzerAPI::Interfaces::IComponent, [100](#)
  - CarbonAnalyzerAPI::Interfaces::IComponent-Parameter, [101](#)
  - CarbonAnalyzerAPI::Interfaces::IMetaData, [110](#)
  - CarbonAnalyzerAPI::Interfaces::ISimulation-Window, [112](#)
- IDataSet.cs, [126](#)
- IFunctionStream.cs, [126](#)
- IFunctionStreams.cs, [126](#)
- IFunctionTrace.cs, [126](#)
- IFunctionTraces.cs, [127](#)
- IMetaData.cs, [127](#)
- IProtection.cs, [127](#)
- ISimulationWindow.cs, [128](#)
- ISimulationWindows.cs, [128](#)
- ITransactionStream.cs, [128](#)
- ITransactionStreams.cs, [128](#)
- Ins
  - CarbonAnalyzerAPI::Interfaces::IProtection, [111](#)
- InterConnectID
  - CarbonAnalyzerAPI::Interfaces::IAXI4ACETransaction, [18](#)
  - CarbonAnalyzerAPI::Interfaces::IAXI4Transaction, [27](#)
  - CarbonAnalyzerAPI::Interfaces::IAXLv2Transaction, [36](#)
- Items
  - CarbonAnalyzerAPI::Interfaces::IAXI4ACETransaction-Beats, [22](#), [23](#)
  - CarbonAnalyzerAPI::Interfaces::IAXI4ACETransactions, [24](#)
  - CarbonAnalyzerAPI::Interfaces::IAXI4Transaction-Beats, [31](#)
  - CarbonAnalyzerAPI::Interfaces::IAXI4Transactions, [33](#)
  - CarbonAnalyzerAPI::Interfaces::IAXLv2Transaction-Beats, [39](#)

- CarbonAnalyzerAPI::Interfaces::IAXIv2Transactions, 40
- CarbonAnalyzerAPI::Interfaces::ICHITransaction-Flits, 93
- CarbonAnalyzerAPI::Interfaces::ICHITransactions, 96
- Label
  - CarbonAnalyzerAPI::Interfaces::ICapiStream, 47
- LastDATFlitCycle
  - CarbonAnalyzerAPI::Interfaces::ICHITransaction-Flits, 95
- Length
  - CarbonAnalyzerAPI::Interfaces::IAXI4ACETransaction, 19
  - CarbonAnalyzerAPI::Interfaces::IAXI4Transaction, 27
  - CarbonAnalyzerAPI::Interfaces::ICapiStream-Channels, 50
  - CarbonAnalyzerAPI::Interfaces::ICapiStream-ChannelSymbols, 53
  - CarbonAnalyzerAPI::Interfaces::ICapiStreams, 54
  - CarbonAnalyzerAPI::Interfaces::IComponent-Parameters, 102
  - CarbonAnalyzerAPI::Interfaces::IComponents, 103
  - CarbonAnalyzerAPI::Interfaces::IFunctionStreams, 107
  - CarbonAnalyzerAPI::Interfaces::ISimulation-Windows, 113
  - CarbonAnalyzerAPI::Interfaces::ITransaction-Streams, 116
- MaxEventCycle
  - CarbonAnalyzerAPI::Interfaces::ICapiStream-Channel, 49
  - CarbonAnalyzerAPI::Interfaces::ICapiStream-ChannelSymbol, 52
- MaxFlitCycle
  - CarbonAnalyzerAPI::Interfaces::ICHITransaction-Flits, 95
- MetaData
  - CarbonAnalyzerAPI::Interfaces::IAnalyzer, 16
- MinEventCycle
  - CarbonAnalyzerAPI::Interfaces::ICapiStream-Channel, 49
  - CarbonAnalyzerAPI::Interfaces::ICapiStream-ChannelSymbol, 52
- MinFlitCycle
  - CarbonAnalyzerAPI::Interfaces::ICHITransaction-Flits, 95
- Model
  - CarbonAnalyzerAPI::Interfaces::IComponent, 100
- Name
  - CarbonAnalyzerAPI::Interfaces::ICapiStream, 47
  - CarbonAnalyzerAPI::Interfaces::ICapiStream-Channel, 49
  - CarbonAnalyzerAPI::Interfaces::ICapiStream-ChannelSymbol, 53
- CarbonAnalyzerAPI::Interfaces::IComponent, 100
- CarbonAnalyzerAPI::Interfaces::IComponent-Parameter, 101
- CarbonAnalyzerAPI::Interfaces::IDataSet, 105
- CarbonAnalyzerAPI::Interfaces::IFunctionStream, 106
- CarbonAnalyzerAPI::Interfaces::INamedObject, 111
- CarbonAnalyzerAPI::Interfaces::ITransaction-Stream, 115
- Numeric
  - CarbonAnalyzerAPI::Interfaces, 11
- NumericValues
  - CarbonAnalyzerAPI::Interfaces::ICapiStream-Channel, 49
- Open
  - CarbonAnalyzerAPI::Interfaces::IAnalyzer, 15
- PC
  - CarbonAnalyzerAPI::Interfaces::IFunctionTrace, 108
- Priv
  - CarbonAnalyzerAPI::Interfaces::IProtection, 111
- Private
  - CarbonAnalyzerAPI::Interfaces::IComponent-Parameter, 101
- ProfileStreams
  - CarbonAnalyzerAPI::Interfaces::IAnalyzer, 16
- Protection
  - CarbonAnalyzerAPI::Interfaces::IAXI4ACETransaction, 19
  - CarbonAnalyzerAPI::Interfaces::IAXI4Transaction, 27
  - CarbonAnalyzerAPI::Interfaces::IAXIv2Transaction, 36
- QOS
  - CarbonAnalyzerAPI::Interfaces::IAXI4ACETransaction, 19
  - CarbonAnalyzerAPI::Interfaces::IAXI4Transaction, 27
- ReadAlloc
  - CarbonAnalyzerAPI::Interfaces::ICache, 41
- ReadOnly
  - CarbonAnalyzerAPI::Interfaces::IComponent-Parameter, 101
- Region
  - CarbonAnalyzerAPI::Interfaces::IAXI4ACETransaction, 19
  - CarbonAnalyzerAPI::Interfaces::IAXI4Transaction, 27
- ReqItems
  - CarbonAnalyzerAPI::Interfaces::ICHITransaction-Flits, 95
- Response
  - CarbonAnalyzerAPI::Interfaces::IAXI4ACETransaction, 19

- CarbonAnalyzerAPI::Interfaces::IAXI4Transaction, 27
- CarbonAnalyzerAPI::Interfaces::IAXIv2Transaction, 36
- ResponseComplete
  - CarbonAnalyzerAPI::Interfaces::IAXI4ACETransaction, 19
  - CarbonAnalyzerAPI::Interfaces::IAXI4Transaction, 27
  - CarbonAnalyzerAPI::Interfaces::IAXIv2Transaction, 36
- ResponseStart
  - CarbonAnalyzerAPI::Interfaces::IAXI4ACETransaction, 19
  - CarbonAnalyzerAPI::Interfaces::IAXI4Transaction, 28
  - CarbonAnalyzerAPI::Interfaces::IAXIv2Transaction, 36
- Return
  - CarbonAnalyzerAPI::Interfaces, 12
- RunTime
  - CarbonAnalyzerAPI::Interfaces::IComponent-Parameter, 101
- SQL
  - CarbonAnalyzerAPI::CycleRange, 14
- Secure
  - CarbonAnalyzerAPI::Interfaces::IProtection, 111
- SetAddr
  - CarbonAnalyzerAPI::Interfaces::ICHITransaction-Flit, 76
- SetBE
  - CarbonAnalyzerAPI::Interfaces::ICHITransaction-Flit, 77
- SetCCID
  - CarbonAnalyzerAPI::Interfaces::ICHITransaction-Flit, 77
- SetChannel
  - CarbonAnalyzerAPI::Interfaces::ICHITransaction-Flit, 77
- SetCycle
  - CarbonAnalyzerAPI::Interfaces::ICHITransaction-Flit, 77
- SetDBID
  - CarbonAnalyzerAPI::Interfaces::ICHITransaction-Flit, 80
- SetData
  - CarbonAnalyzerAPI::Interfaces::ICHITransaction-Flit, 77
- SetData10
  - CarbonAnalyzerAPI::Interfaces::ICHITransaction-Flit, 79
- SetData12
  - CarbonAnalyzerAPI::Interfaces::ICHITransaction-Flit, 79
- SetData14
  - CarbonAnalyzerAPI::Interfaces::ICHITransaction-Flit, 79
- SetData2
  - CarbonAnalyzerAPI::Interfaces::ICHITransaction-Flit, 79
  - SetData4
    - CarbonAnalyzerAPI::Interfaces::ICHITransaction-Flit, 79
  - SetData6
    - CarbonAnalyzerAPI::Interfaces::ICHITransaction-Flit, 80
  - SetData8
    - CarbonAnalyzerAPI::Interfaces::ICHITransaction-Flit, 80
  - SetDataID
    - CarbonAnalyzerAPI::Interfaces::ICHITransaction-Flit, 80
  - SetDynPCrd
    - CarbonAnalyzerAPI::Interfaces::ICHITransaction-Flit, 80
  - SetExcl
    - CarbonAnalyzerAPI::Interfaces::ICHITransaction-Flit, 82
  - SetExpCompAck
    - CarbonAnalyzerAPI::Interfaces::ICHITransaction-Flit, 82
  - SetLPID
    - CarbonAnalyzerAPI::Interfaces::ICHITransaction-Flit, 82
  - SetLikelyShared
    - CarbonAnalyzerAPI::Interfaces::ICHITransaction-Flit, 82
  - SetMemAttr
    - CarbonAnalyzerAPI::Interfaces::ICHITransaction-Flit, 82
  - SetNS
    - CarbonAnalyzerAPI::Interfaces::ICHITransaction-Flit, 84
  - SetOpcode
    - CarbonAnalyzerAPI::Interfaces::ICHITransaction-Flit, 84–86
  - SetOrder
    - CarbonAnalyzerAPI::Interfaces::ICHITransaction-Flit, 86
  - SetPCrdType
    - CarbonAnalyzerAPI::Interfaces::ICHITransaction-Flit, 86
  - SetQoS
    - CarbonAnalyzerAPI::Interfaces::ICHITransaction-Flit, 86
  - SetREQOpcodeType
    - CarbonAnalyzerAPI::Interfaces::ICHITransaction-Flit, 87
  - SetRSVDC
    - CarbonAnalyzerAPI::Interfaces::ICHITransaction-Flit, 88
  - SetResp
    - CarbonAnalyzerAPI::Interfaces::ICHITransaction-Flit, 87
  - SetRespErr



- CarbonAnalyzerAPI::Interfaces::ICHITransaction-Flit, [87](#), [88](#)
- SetSize
  - CarbonAnalyzerAPI::Interfaces::ICHITransaction-Flit, [88](#)
- SetSnpAttr
  - CarbonAnalyzerAPI::Interfaces::ICHITransaction-Flit, [88](#)
- SetSrcID
  - CarbonAnalyzerAPI::Interfaces::ICHITransaction-Flit, [90](#)
- SetTgtID
  - CarbonAnalyzerAPI::Interfaces::ICHITransaction-Flit, [90](#)
- SetTxnID
  - CarbonAnalyzerAPI::Interfaces::ICHITransaction-Flit, [90](#)
- SimulationCycles
  - CarbonAnalyzerAPI::Interfaces::IMetaData, [110](#)
- SimulationWindows
  - CarbonAnalyzerAPI::Interfaces::ICapiStream, [47](#)
  - CarbonAnalyzerAPI::Interfaces::IFunctionStream, [106](#)
  - CarbonAnalyzerAPI::Interfaces::ITransaction-Stream, [115](#)
- SourceInstance
  - CarbonAnalyzerAPI::Interfaces::ICapiStream, [47](#)
- SourceName
  - CarbonAnalyzerAPI::Interfaces::IFunctionStream, [106](#)
  - CarbonAnalyzerAPI::Interfaces::ITransaction-Stream, [115](#)
- SpecifiedToEnd
  - CarbonAnalyzerAPI::CycleRange, [14](#)
- SpecifiedRange
  - CarbonAnalyzerAPI::CycleRange, [14](#)
- Start
  - CarbonAnalyzerAPI::CycleRange, [14](#)
- StartCycle
  - CarbonAnalyzerAPI::Interfaces::ISimulation-Window, [112](#)
- StartToRange
  - CarbonAnalyzerAPI::CycleRange, [14](#)
- StreamName
  - CarbonAnalyzerAPI::Interfaces::IFunctionStream, [106](#)
  - CarbonAnalyzerAPI::Interfaces::ITransaction-Stream, [115](#)
- StreamingWidth
  - CarbonAnalyzerAPI::Interfaces::IAXI4ACETransaction, [19](#)
  - CarbonAnalyzerAPI::Interfaces::IAXI4Transaction, [28](#)
  - CarbonAnalyzerAPI::Interfaces::IAXIv2Transaction, [36](#)
- StrobeHigh
  - CarbonAnalyzerAPI::Interfaces::IAXI4ACETransaction-Beat, [21](#)
- CarbonAnalyzerAPI::Interfaces::IAXI4Transaction-Beat, [30](#)
- CarbonAnalyzerAPI::Interfaces::IAXIv2Transaction-Beat, [38](#)
- StrobeLow
  - CarbonAnalyzerAPI::Interfaces::IAXI4ACETransaction-Beat, [21](#)
  - CarbonAnalyzerAPI::Interfaces::IAXI4Transaction-Beat, [30](#)
  - CarbonAnalyzerAPI::Interfaces::IAXIv2Transaction-Beat, [38](#)
- SubType
  - CarbonAnalyzerAPI::Interfaces::ITransaction-Stream, [115](#)
- Symbol
  - CarbonAnalyzerAPI::Interfaces, [11](#)
- SymbolValues
  - CarbonAnalyzerAPI::Interfaces::ICapiStream-Channel, [50](#)
- Symbols
  - CarbonAnalyzerAPI::Interfaces::ICapiStream-Channel, [49](#)
- TID
  - CarbonAnalyzerAPI::Interfaces::IAXI4ACETransaction, [19](#)
  - CarbonAnalyzerAPI::Interfaces::IAXI4Transaction, [28](#)
  - CarbonAnalyzerAPI::Interfaces::IAXIv2Transaction, [36](#)
- ToEnding
  - CarbonAnalyzerAPI::CycleRange, [14](#)
- TotalWindowCycles
  - CarbonAnalyzerAPI::Interfaces::ICapiStream, [47](#)
  - CarbonAnalyzerAPI::Interfaces::IFunctionStream, [106](#)
  - CarbonAnalyzerAPI::Interfaces::ITransaction-Stream, [115](#)
- TraceType
  - CarbonAnalyzerAPI::Interfaces, [11](#)
- Traces
  - CarbonAnalyzerAPI::Interfaces::IFunctionStream, [106](#)
- TransactionConnectionID
  - CarbonAnalyzerAPI::Interfaces::IAXI4ACETransaction, [19](#)
  - CarbonAnalyzerAPI::Interfaces::IAXI4Transaction, [28](#)
  - CarbonAnalyzerAPI::Interfaces::IAXIv2Transaction, [36](#)
  - CarbonAnalyzerAPI::Interfaces::ICHITransaction, [55](#)
- TransactionID
  - CarbonAnalyzerAPI::Interfaces::IAXI4ACETransaction-Beat, [21](#)
  - CarbonAnalyzerAPI::Interfaces::IAXI4Transaction-Beat, [30](#)
  - CarbonAnalyzerAPI::Interfaces::IAXIv2Transaction-Beat, [38](#)

- CarbonAnalyzerAPI::Interfaces::ICHITransaction, 55
- CarbonAnalyzerAPI::Interfaces::ICHITransaction-Flit, 91
- TransactionLatency
  - CarbonAnalyzerAPI::Interfaces::IAXI4ACETransaction, 19
  - CarbonAnalyzerAPI::Interfaces::IAXI4Transaction, 28
- TransactionStreamTypes
  - CarbonAnalyzerAPI::Interfaces, 12
- TransactionStreams
  - CarbonAnalyzerAPI::Interfaces::IAnalyzer, 16
- TransactionType
  - CarbonAnalyzerAPI::Interfaces::IAXI4ACETransaction, 20
- TransactionsBeats
  - CarbonAnalyzerAPI::Interfaces::IAXI4ACETransaction, 19
  - CarbonAnalyzerAPI::Interfaces::IAXI4Transaction, 28
  - CarbonAnalyzerAPI::Interfaces::IAXIv2Transaction, 36
- TransactionsFlits
  - CarbonAnalyzerAPI::Interfaces::ICHITransaction, 56
- Type
  - CarbonAnalyzerAPI::Interfaces::ICapiStream-Channel, 50
  - CarbonAnalyzerAPI::Interfaces::IComponent, 100
  - CarbonAnalyzerAPI::Interfaces::IFunctionTrace, 109
- UniqueTransactionsCount
  - CarbonAnalyzerAPI::Interfaces::ICHITransactions, 98
- UserAddress
  - CarbonAnalyzerAPI::Interfaces::IAXI4ACETransaction, 20
  - CarbonAnalyzerAPI::Interfaces::IAXI4Transaction, 28
- UserBitWidth
  - CarbonAnalyzerAPI::Interfaces::IAXI4ACETransaction, 20
  - CarbonAnalyzerAPI::Interfaces::IAXI4Transaction, 28
- UserData
  - CarbonAnalyzerAPI::Interfaces::IAXI4ACETransaction-Beat, 21
  - CarbonAnalyzerAPI::Interfaces::IAXI4Transaction-Beat, 30
- UserField
  - CarbonAnalyzerAPI::Interfaces::ICHITransaction-Flit, 91
- UserResponse
  - CarbonAnalyzerAPI::Interfaces::IAXI4ACETransaction, 20
  - CarbonAnalyzerAPI::Interfaces::IAXI4Transaction, 28
- Value
  - CarbonAnalyzerAPI::Interfaces::ICapiDataNumeric-Value, 43
  - CarbonAnalyzerAPI::Interfaces::ICapiDataSymbol-Value, 44
  - CarbonAnalyzerAPI::Interfaces::ICapiStream-ChannelSymbol, 53
  - CarbonAnalyzerAPI::Interfaces::IComponent-Parameter, 101
- Value1
  - CarbonAnalyzerAPI::Interfaces::ICapiDataCorrelated-Value, 42
- Value2
  - CarbonAnalyzerAPI::Interfaces::ICapiDataCorrelated-Value, 42
- Values
  - CarbonAnalyzerAPI::Interfaces::ICapiDataCorrelated-Values, 42
  - CarbonAnalyzerAPI::Interfaces::ICapiDataNumeric-Values, 44
  - CarbonAnalyzerAPI::Interfaces::ICapiDataSymbol-Values, 45
  - CarbonAnalyzerAPI::Interfaces::IFunctionTraces, 109
- Version
  - CarbonAnalyzerAPI::Interfaces::IMetaData, 110
- WriteAlloc
  - CarbonAnalyzerAPI::Interfaces::ICache, 41
- XactionID
  - CarbonAnalyzerAPI::Interfaces::IAXI4ACETransaction, 20
  - CarbonAnalyzerAPI::Interfaces::IAXI4Transaction, 28
  - CarbonAnalyzerAPI::Interfaces::IAXIv2Transaction, 37