

NEX-PCIXSWL

C1: PCI64-2 [0] C2: PCI64-2 [0] Delta Time: 0s				
Sample	PCIX64 AD_Hi	PCIX64 AD_Lo	PCIX64 Mnemonics	Timestamp
6	00000000	F7FF0000	MEMORY WRITE ADDRESS	44.431,000 us
7	-----	060D0008	ATTRIBUTE CYCLE - DWORD	30.000 ns
	-----	060D0008	No Snoop = Not Set	
	-----	060D0008	Relaxed Ordering = Not Set	
	-----	060D0008	Tag = 0x006 / 0d6	
	-----	060D0008	Req. Bus #0x00D / 0d13	
	-----	060D0008	Req. Device #0x000 / 0d0	
	-----	060D0008	Req. Function #0x000 / 0d0	
	-----	060D0008	Byte Enables - Bytes 3-0	
8	-----	80140050	SINGLE DATA PHASE DISCONNECT	270.000 ns
9	00000000	F7FF0000	MEMORY WRITE ADDRESS	180.000 ns
10	-----	070D0008	ATTRIBUTE CYCLE - DWORD	30.000 ns
	-----	070D0008	No Snoop = Not Set	
	-----	070D0008	Relaxed Ordering = Not Set	
	-----	070D0008	Tag = 0x007 / 0d7	
	-----	070D0008	Req. Bus #0x00D / 0d13	
	-----	070D0008	Req. Device #0x000 / 0d0	
	-----	070D0008	Req. Function #0x000 / 0d0	
	-----	070D0008	Byte Enables - Bytes 3-0	
11	00000000	-----	SINGLE DATA PHASE DISCONNECT	270.000 ns
12	00000000	F7FF0008	MEMORY WRITE ADDRESS	180.000 ns
13	-----	040D0008	ATTRIBUTE CYCLE - DWORD	30.000 ns
	-----	040D0008	No Snoop = Not Set	
	-----	040D0008	Relaxed Ordering = Not Set	
	-----	040D0008	Tag = 0x004 / 0d4	
	-----	040D0008	Req. Bus #0x00D / 0d13	
	-----	040D0008	Req. Device #0x000 / 0d0	
	-----	040D0008	Req. Function #0x000 / 0d0	
	-----	040D0008	Byte Enables - Bytes 3-0	
14	-----	80F70050	SINGLE DATA PHASE DISCONNECT	270.000 ns
15	00000000	F7FF0008	MEMORY WRITE ADDRESS	180.000 ns
16	-----	050D0008	ATTRIBUTE CYCLE - DWORD	30.000 ns
	-----	050D0008	No Snoop = Not Set	
	-----	050D0008	Relaxed Ordering = Not Set	
	-----	050D0008	Tag = 0x005 / 0d5	

- Disassembly of a PCI-X Bus running at 66MHz or 133MHz (Mode 1)
- Timing Analysis to 8GS/s (125ps) on each channel depending upon acquisition card used
- Logic Analyzer Setup Software gets you up and running fast
- Simultaneous State and Timing acquisition on each channel
- Trigger on Setup/Hold violations on all channels

General Description

PCIX Disassembly Software

The included NEX-PCIX disassembly software executes on the Tektronix Logic Analyzer. This software decodes bus transactions and displays information in an easily understood form, just like a typical Tektronix microprocessor disassembler. All PCI-X Cycle types are identified and Config cycles are decoded to reflect the meaning of the registers.

It is also possible to filter the data display to show only those cycle types of interest. The user can choose to display or suppress Memory, I/O, or Config cycles to permit easy and quick analysis of only those cycles of interest.

Another feature of the disassembly software is its ability to intelligently acquire PCI-X data. By taking advantage of the data clocking power built in to the Tektronix Logic Analyzers the disassembly software is able to acquire only the PCI-X bus cycles and ignore Idle and Wait states. This means that the user is able to make optimum use of the acquisition card's memory and see more bus transactions. For debug purposes the user also has the ability to override this function and acquire data on every PCI-X CLK rising edge to permit the user to see all of the bus traffic including the Idle and Wait states.

Timing Analysis

Timing analysis of the PCI-X bus can be done at up to 8Ghz (125ps) on each channel depending upon the acquisition card used. Fast timing acquisition results in excellent timing analysis on each channel of the PCI-X bus.

NEX-PCIXSWL Mictor Probe Pinout

Tek Mictor Pin #	AMP Mictor Pin #	TLA700 Channel	PCI-X Signal Name	PCI-X Pin #	Tek Mictor Pin #	AMP Mictor Pin #	TLA700 Channel	PCI-X Signal Name	PCI-X Pin #
3	5	CLK:0	CLK ¹	B16	36	6	CLK:1	DEVSEL# ¹	B37
4	7	A3:7	AD[31] ¹	B20	35	8	A1:7	AD[15] ¹	A44
5	9	A3:6	AD[30] ¹	A20	34	10	A1:6	AD[14] ¹	B45
6	11	A3:5	AD[29] ¹	B21	33	12	A1:5	AD[13] ¹	A46
7	13	A3:4	AD[28] ¹	A22	32	14	A1:4	AD[12] ¹	B47
8	15	A3:3	AD[27] ¹	B23	31	16	A1:3	AD[11] ¹	A47
9	17	A3:2	AD[26] ¹	A23	30	18	A1:2	AD[10] ¹	B48
10	19	A3:1	AD[25] ¹	B24	29	20	A1:1	AD[9] ¹	A49
11	21	A3:0	AD[24] ¹	A25	28	22	A1:0	AD[8] ¹	B52
12	23	A2:7	AD[23] ¹	B27	27	24	A0:7	AD[7] ¹	B53
13	25	A2:6	AD[22] ¹	A28	26	26	A0:6	AD[6] ¹	A54
14	27	A2:5	AD[21] ¹	B29	25	28	A0:5	AD[5] ¹	B55
15	29	A2:4	AD[20] ¹	A29	24	30	A0:4	AD[4] ¹	A55
16	31	A2:3	AD[19] ¹	B30	23	32	A0:3	AD[3] ¹	B56
17	33	A2:2	AD[18] ¹	A31	22	34	A0:2	AD[2] ¹	A57
18	35	A2:1	AD[17] ¹	B32	21	36	A0:1	AD[1] ¹	A58
19	37	A2:0	AD[16] ¹	A32	20	38	A0:0	AD[0] ¹	B58

Group A Mictor Connector

Tek Mictor Pin #	AMP Mictor Pin #	TLA700 Channel	PCI-X Signal Name	PCI-X Pin #	Tek Mictor Pin #	AMP Mictor Pin #	TLA700 Channel	PCI-X Signal Name	PCI-X Pin #
3	5	CLK:3	RST# ¹	A15	36	6	QUAL:1		
4	7	C3:7	C/BE[7] ¹	A64	35	8	C1:7	unused	-----
5	9	C3:6	C/BE[6] ¹	B65	34	10	C1:6	M66EN	B49
6	11	C3:5	C/BE[5] ¹	A65	33	12	C1:5	REQ64# ¹	A60
7	13	C3:4	C/BE[4] ¹	B66	32	14	C1:4	PAR64	A67
8	15	C3:3	C/BE[3] ¹	B26	31	16	C1:3	unused	-----
9	17	C3:2	C/BE[2] ¹	B33	30	18	C1:2	unused	-----
10	19	C3:1	C/BE[1] ¹	B44	29	20	C1:1	unused	-----
11	21	C3:0	C/BE[0] ¹	A52	28	22	C1:0	unused	-----
12	23	C2:7	SBO#	A41	27	24	C0:7	ACQ64# ¹	B60
13	25	C2:6	LOCK#	B39	26	26	C0:6	GNT# ¹	A17
14	27	C2:5	PERR#	B40	25	28	C0:5	REQ# ¹	B18
15	29	C2:4	PAR	A43	24	30	C0:4	IDSEL	A26
16	31	C2:3	STOP# ¹	A38	23	32	C0:3	INTD#	B08
17	33	C2:2	TRDY# ¹	A36	22	34	C0:2	INTC#	A07
18	35	C2:1	IRDY# ¹	B35	21	36	C0:1	INTB#	B07
19	37	C2:0	FRAME# ¹	A34	20	38	C0:0	INTA#	A06

Group C Mictor Connector

Note:

1. These signals are required for proper clocking and disassembly

NEX-PCIXSWL Mictor Probe Pinout (Cont'd)

Tek Mictor Pin #	AMP Mictor Pin #	TLA700 Channel	PCI-X Signal Name	PCI-X Pin #	Tek Mictor Pin #	AMP Mictor Pin #	TLA700 Channel	PCI-X Signal Name	PCI-X Pin #
3	5	QUAL:0	SDONE	A40	36	6	CLK:2	SERR	B42
4	7	D3:7	AD[63] ¹	B68	35	8	D1:7	AD[47] ¹	B80
5	9	D3:6	AD[62] ¹	A68	34	10	D1:6	AD[46] ¹	A80
6	11	D3:5	AD[61] ¹	B69	33	12	D1:5	AD[45] ¹	B81
7	13	D3:4	AD[60] ¹	A70	32	14	D1:4	AD[44] ¹	A82
8	15	D3:3	AD[59] ¹	B71	31	16	D1:3	AD[43] ¹	B83
9	17	D3:2	AD[58] ¹	A71	30	18	D1:2	AD[42] ¹	A83
10	19	D3:1	AD[57] ¹	B72	29	20	D1:1	AD[41] ¹	B84
11	21	D3:0	AD[56] ¹	A73	28	22	D1:0	AD[40] ¹	A85
12	23	D2:7	AD[55] ¹	B74	27	24	D0:7	AD[39] ¹	B86
13	25	D2:6	AD[54] ¹	A74	26	26	D0:6	AD[38] ¹	A86
14	27	D2:5	AD[53] ¹	B75	25	28	D0:5	AD[37] ¹	B87
15	29	D2:4	AD[52] ¹	A76	24	30	D0:4	AD[36] ¹	A88
16	31	D2:3	AD[51] ¹	B77	23	32	D0:3	AD[35] ¹	B89
17	33	D2:2	AD[50] ¹	A77	22	34	D0:2	AD[34] ¹	A89
18	35	D2:1	AD[49] ¹	B78	21	36	D0:1	AD[33] ¹	B90
19	37	D2:0	AD[48] ¹	A79	20	38	D0:0	AD[32] ¹	A91

Group D Mictor Connector

Note:

1. These signals are required for proper clocking and disassembly

NEX-PCIXSWL Compression Probe Pinout

Pad P3-PH2	Input	PCI-X Signal Name	PCI-X Pin #
A15	CK0-	Gnd	Gnd
A13	CK0+	CLK ¹	B16
B12	A3:7	AD[31] ¹	B20
B10	A3:6	AD[30] ¹	A20
A12	A3:5	AD[29] ¹	B21
A10	A3:4	AD[28] ¹	A22
B9	A3:3	AD[27] ¹	B23
B7	A3:2	AD[26] ¹	A23
A9	A3:1	AD[25] ¹	B24
A7	A3:0	AD[24] ¹	A25
B6	A2:7	AD[23] ¹	B27
B4	A2:6	AD[22] ¹	A28
A6	A2:5	AD[21] ¹	B29
A4	A2:4	AD[20] ¹	A29
B3	A2:3	AD[19] ¹	B30
B1	A2:2	AD[18] ¹	A31
A3	A2:1	AD[17] ¹	B32
A1	A2:0	AD[16] ¹	A32

Pad P3-PH1	Input	PCI-X Signal Name	PCI-X Pin #
A15	Q0-	Gnd	Gnd
A13	Q0+	SDONE	A40
B12	D3:7	AD[63] ¹	B68
B10	D3:6	AD[62] ¹	A68
A12	D3:5	AD[61] ¹	B69
A10	D3:4	AD[60] ¹	A70
B9	D3:3	AD[59] ¹	B71
B7	D3:2	AD[58] ¹	A71
A9	D3:1	AD[57] ¹	B72
A7	D3:0	AD[56] ¹	A73
B6	D2:7	AD[55] ¹	B74
B4	D2:6	AD[54] ¹	A74
A6	D2:5	AD[53] ¹	B75
A4	D2:4	AD[52] ¹	A76
B3	D2:3	AD[51] ¹	B77
B1	D2:2	AD[50] ¹	A77
A3	D2:1	AD[49] ¹	B78
A1	D2:0	AD[48] ¹	A79

Pad P2-PH2	Input	PCI-X Signal Name	PCI-X Pin #
A15	CK1-	Gnd	Gnd
A13	CK1+	DEVSEL# ¹	B37
B12	A1:7	AD[15] ¹	A44
B10	A1:6	AD[14] ¹	B45
A12	A1:5	AD[13] ¹	A46
A10	A1:4	AD[12] ¹	B47
B9	A1:3	AD[11] ¹	A47
B7	A1:2	AD[10] ¹	B48
A9	A1:1	AD[9] ¹	A49
A7	A1:0	AD[8] ¹	B52
B6	A0:7	AD[7] ¹	B53
B4	A0:6	AD[6] ¹	A54
A6	A0:5	AD[5] ¹	B55
A4	A0:4	AD[4] ¹	A55
B3	A0:3	AD[3] ¹	B56
B1	A0:2	AD[2] ¹	A57
A3	A0:1	AD[1] ¹	A58
A1	A0:0	AD[0] ¹	B58

Pad P2-PH1	Input	PCI-X Signal Name	PCI-X Pin #
A15	CK2-	Gnd	Gnd
A13	CK2+	SERR	B42
B12	D1:7	AD[47] ¹	B80
B10	D1:6	AD[46] ¹	A80
A12	D1:5	AD[45] ¹	B81
A10	D1:4	AD[44] ¹	A82
B9	D1:3	AD[43] ¹	B83
B7	D1:2	AD[42] ¹	A83
A9	D1:1	AD[41] ¹	B84
A7	D1:0	AD[40] ¹	A85
B6	D0:7	AD[39] ¹	B86
B4	D0:6	AD[38] ¹	A86
A6	D0:5	AD[37] ¹	B87
A4	D0:4	AD[36] ¹	A88
B3	D0:3	AD[35] ¹	B89
B1	D0:2	AD[34] ¹	A89
A3	D0:1	AD[33] ¹	B90
A1	D0:0	AD[32] ¹	A91

Note:

1. These signals are required for proper clocking and disassembly

NEX-PCIXSWL Compression Pinout (Cont'd)

Pad P1-PH2	Input	PCI-X Signal Name	PCI-X Pin #
A15	CK3-	Gnd	
A13	CK3+	RST# ¹	A15
B12	C3:7	C/BE[7]# ¹	A64
B10	C3:6	C/BE[6]# ¹	B65
A12	C3:5	C/BE[5]# ¹	A65
A10	C3:4	C/BE[4]# ¹	B66
B9	C3:3	C/BE[3]# ¹	B26
B7	C3:2	C/BE[2]# ¹	B33
A9	C3:1	C/BE[1]# ¹	B44
A7	C3:0	C/BE[0]# ¹	A52
B6	C2:7	SBO#	A41
B4	C2:6	LOCK#	B39
A6	C2:5	PERR#	B40
A4	C2:4	PAR	A43
B3	C2:3	STOP# ¹	A38
B1	C2:2	TRDY# ¹	A36
A3	C2:1	IRDY# ¹	B35
A1	C2:0	FRAME# ¹	A34

Pad P1-PH1	Input	PCI-X Signal Name	PCI-X Pin #
A15	Q1-		
A13	Q1+		
B12	C1:7	unused	-----
B10	C1:6	M66EN	B49
A12	C1:5	REQ64# ¹	A60
A10	C1:4	PAR64	A67
B9	C1:3	Unused	-----
B7	C1:2	Unused	-----
A9	C1:1	Unused	-----
A7	C1:0	Unused	-----
B6	C0:7	ACQ64# ¹	B60
B4	C0:6	GNT# ¹	A17
A6	C0:5	REQ# ¹	B18
A4	C0:4	IDSEL	A26
B3	C0:3	INTD#	B08
B1	C0:2	INTC#	A07
A3	C0:1	INTB#	B07
A1	C0:0	INTA#	A06

Note:

1. These signals are required for proper clocking and disassembly

NEX-PCIXSWL D-Max Probe Pinouts

Probe 3 Pad	TLA Input	PCI Signal	Probe 3 Pad	TLA Input	PCI Signal	Probe 2 Pad	TLA Input	PCI Signal
A8	CK0-	GND	B20	Q0-		A8	CK1-	GND
A7	CK0+	CLK ¹	B21	Q0+	SDONE	A7	CLK1	DEVSEL# ¹
A14	A3:7	AD[31] ¹	B14	D3:7	AD[63] ¹	A14	A1:7	AD[15] ¹
A13	A3:6	AD[30] ¹	B15	D3:6	AD[62] ¹	A13	A1:6	AD[14] ¹
B12	A3:5	AD[29] ¹	A16	D3:5	AD[61] ¹	B12	A1:5	AD[13] ¹
B11	A3:4	AD[28] ¹	A17	D3:4	AD[60] ¹	B11	A1:4	AD[12] ¹
A11	A3:3	AD[27] ¹	B17	D3:3	AD[59] ¹	A11	A1:3	AD[11] ¹
A10	A3:2	AD[26] ¹	B18	D3:2	AD[58] ¹	A10	A1:2	AD[10] ¹
B9	A3:1	AD[25] ¹	A19	D3:1	AD[57] ¹	B9	A1:1	AD[9] ¹
B8	A3:0	AD[24] ¹	A20	D3:0	AD[56] ¹	B8	A1:0	AD[8] ¹
B6	A2:7	AD[23] ¹	A22	D2:7	AD[55] ¹	B6	A0:7	AD[7] ¹
B5	A2:6	AD[22] ¹	A23	D2:6	AD[54] ¹	B5	A0:6	AD[6] ¹
A5	A2:5	AD[21] ¹	B23	D2:5	AD[53] ¹	A5	A0:5	AD[5] ¹
A4	A2:4	AD[20] ¹	B24	D2:4	AD[52] ¹	A4	A0:4	AD[4] ¹
B3	A2:3	AD[19] ¹	A25	D2:3	AD[51] ¹	B3	A0:3	AD[3] ¹
B2	A2:2	AD[18] ¹	A26	D2:2	AD[50] ¹	B2	A0:2	AD[2] ¹
A2	A2:1	AD[17] ¹	B26	D2:1	AD[49] ¹	A2	A0:1	AD[1] ¹
A1	A2:0	AD[16] ¹	B27	D2:0	AD[48] ¹	A1	A0:0	AD[0] ¹

Probe 2 Pad	TLA Input	PCI Signal	Probe 1 Pad	TLA Input	PCI Signal	Probe 1 Pad	TLA Input	PCI Signal
B20	CK2-	---	A8	CK3-	GND	B20	Q1-	---
B21	CK2+	SERR	A7	CK3+	RST# ¹	B21	Q1+	---
B14	D1:7	AD[47] ¹	A14	C3:7	C/BE[7]# ¹	B14	C1:7	---
B15	D1:6	AD[46] ¹	A13	C3:6	C/BE[6]# ¹	B15	C1:6	M66EN
A16	D1:5	AD[45] ¹	B12	C3:5	C/BE[5]# ¹	A16	C1:5	REQ64# ¹
A17	D1:4	AD[44] ¹	B11	C3:4	C/BE[4]# ¹	A17	C1:4	PAR64
B17	D1:3	AD[43] ¹	A11	C3:3	C/BE[3]# ¹	B17	C1:3	---
B18	D1:2	AD[42] ¹	A10	C3:2	C/BE[2]# ¹	B18	C1:2	---
A19	D1:1	AD[41] ¹	B9	C3:1	C/BE[1]# ¹	A19	C1:1	---
A20	D1:0	AD[40] ¹	B8	C3:0	C/BE[0]# ¹	A20	C1:0	---
A22	D0:7	AD[39] ¹	B6	C2:7	SBO#	A22	C0:7	ACK64# ¹
A23	D0:6	AD[38] ¹	B5	C2:6	LOCK#	A23	C0:6	GNT# ¹
B23	D0:5	AD[37] ¹	A5	C2:5	PERR#	B23	C0:5	REQ# ¹
B24	D0:4	AD[36] ¹	A4	C2:4	PAR	B24	C0:4	IDSEL
A25	D0:3	AD[35] ¹	B3	C2:3	STOP# ¹	A25	C0:3	INTD#
A26	D0:2	AD[34] ¹	B2	C2:2	TRDY# ¹	A26	C0:2	INTC#
B26	D0:1	AD[33] ¹	A2	C2:1	IRDY# ¹	B26	C0:1	INTB#
B27	D0:0	AD[32] ¹	A1	C2:0	FRAME# ¹	B27	C0:0	INTA#

Note:

1. These signals are required for proper clocking and disassembly

Tektronix Logic Analyzers Supported

All Tektronix TLA600, TLA700 and TLA5000 series Logic Analyzers and acquisition cards with a minimum of 102 channels. Acquisition card minimum synchronous speed requirements are: 100MHz for a PCI-X target running 100MHz or slower; 200MHz or faster sync speed required for a PCI-X target running at 133MHz.

Ordering / Contact Information

Part Number NEX-PCIXSWL

Single User Site License - PCI-X Analysis Software

Part Number NEX-PCIXSWL/5

5 User Site License – PCI-X Analysis Software

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