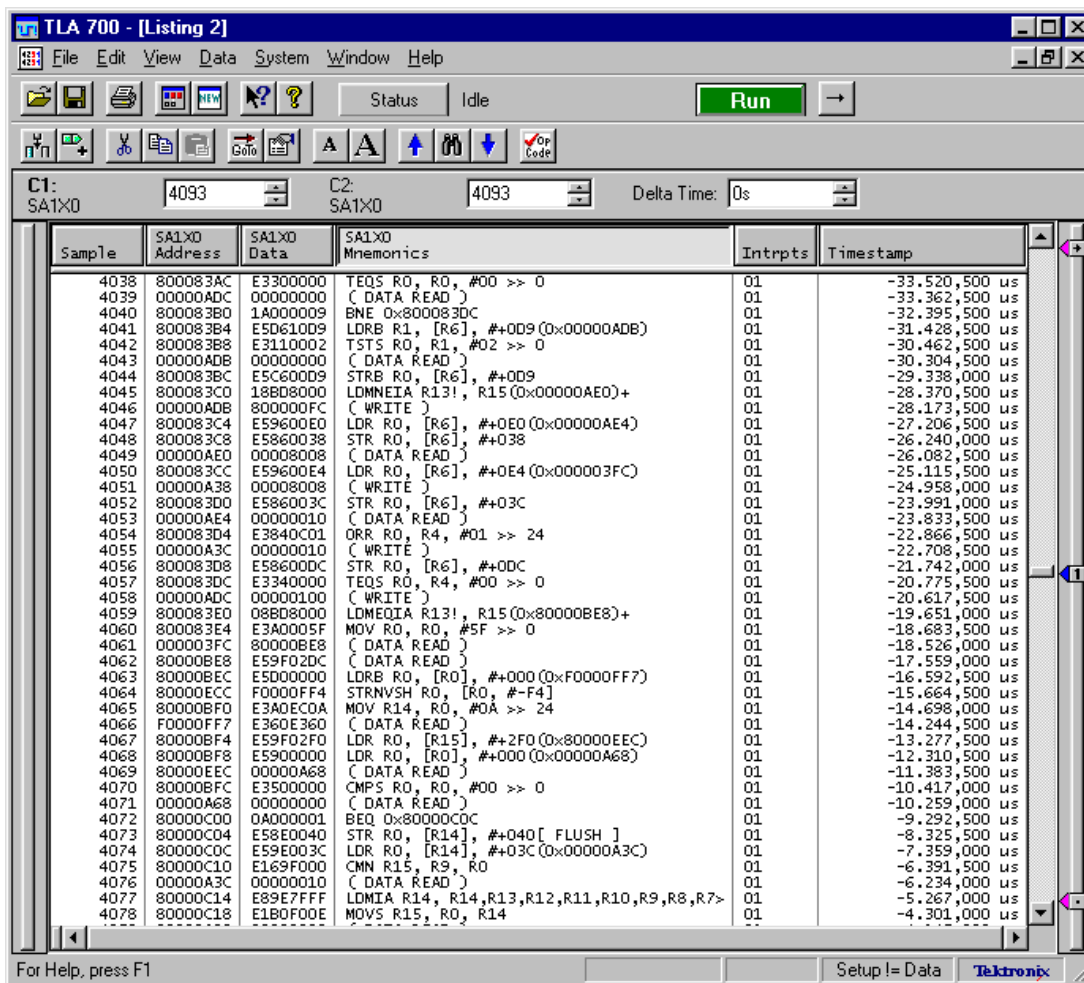


## NEX-SA110



- Quick setup of the Analyzer
- Disassembly of the acquired SA110 data
- Custom clocking or Clock on every edge
- 8GHz Timing acquisition on every channel

When installed on the TLA600 or TLA700 the NEX-SA110 software provides quick and easy setup of the TLA600/700 and disassembly of the acquired SA110 data.

## General Description

The NEX-SA110 support is software only. Please see below for information on probing.

### Connecting the TLA600/700 to a SA110 target

When possible it is recommended that the user add Mictor connectors to their target for the interface to the TLA600/700 using Tektronix P6434/P6860 high-density probes.

**IMPORTANT:** Specific wiring must be followed when routing the SA110 signals to Mictor connectors if the NEX-SA110 support is going to be used. Table 2 shows this pinout.

### Clips for connecting to the SA110

If a clip is needed to connect the TLA600/700 logic analyzer to the SA110 micro please contact Nexus Technology for a list of recommended adapter vendors. You can also get a list of recommended clips from our web site at <http://www.busboards.com>.

### Disassembly Features

- Identification / Support of the following:
- Architecture v4 Level Instructions and Addressing modes
- Load data read cycle detection
- LDM and LDC multiple load read cycle detection
- Branch Prefetch Instruction flush detection
- Mark-Opcode support

Support of all five addressing modes

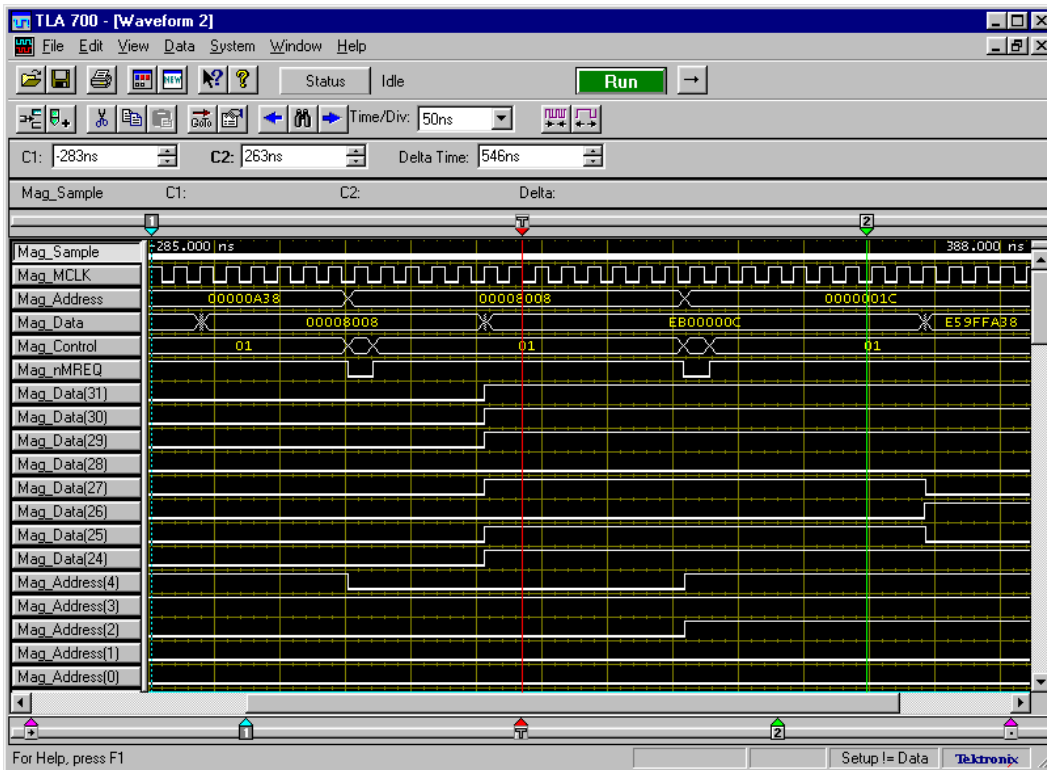
Instructions supported:

ADC, ADD, AND, B, BL, BIC, BX, CDP, CMN, CMP, EOR, LDC, LDM(1), LDM(2), LDM(3), LDR, LDRB, LDRBT, LDRH, LDRSB, LDRSH, LDRT, MCR, MLA, MOV, MRC, MRS (CPSR and SPSR), MSR (CPSR and SPSR), MUL, MVN, ORR, RSB, RSC, SBC, SMLAL, SMULL, STC, STM(1), STM(2), STR, STRB, STRBT, STRH, STRT, SUB, SWI, SWP, SWPB, TEQ, TST, UMLAL, UMULL

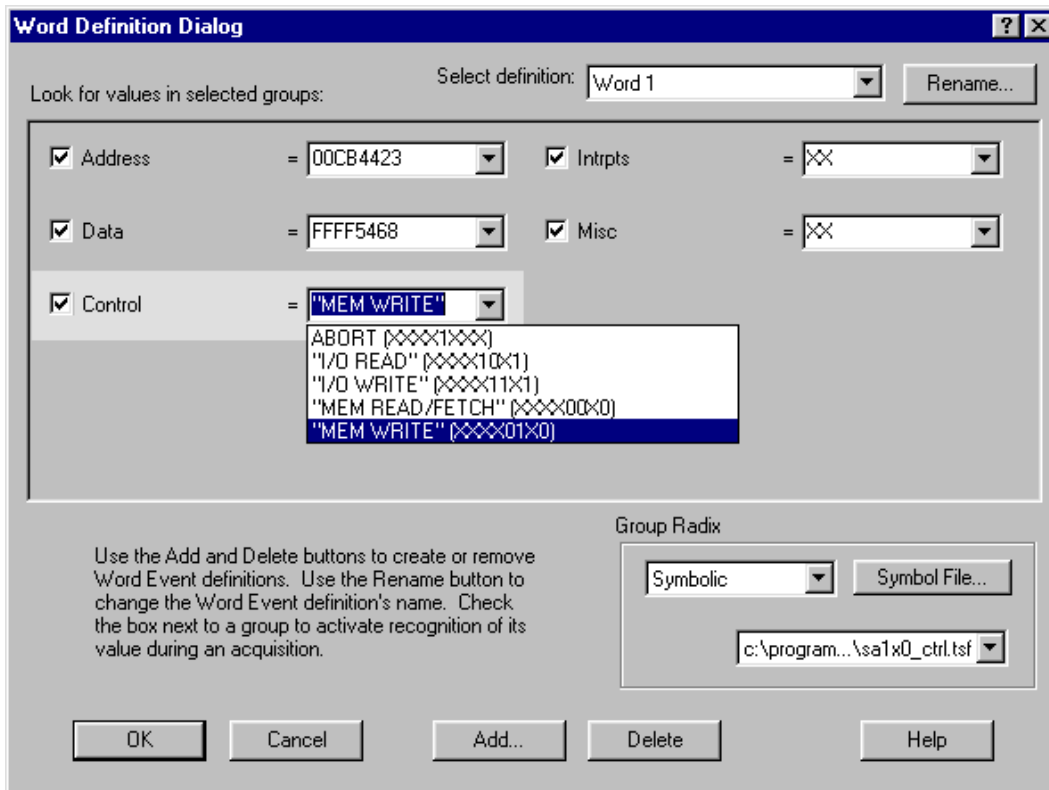
**Thumb instruction set not supported at this time.**

**The SA110 supports only 32-bit instruction Data Width.**

## Timing Display



## Trigger Menu



## SA110 TLA600/700 Wiring

Name	Signal Name	SA110 Pin #	TLA600/700 input	Group Name	Signal Name	SA110 Pin #	TLA600/700 input
Address	A[31]	120	A3:7	Data	D[31]	47	D3:7
	A[30]	119	A3:6		D[30]	46	D3:6
	A[29]	118	A3:5		D[29]	45	D3:5
	A[28]	117	A3:4		D[28]	44	D3:4
	A[27]	116	A3:3		D[27]	41	D3:3
	A[26]	115	A3:2		D[26]	40	D3:2
	A[25]	112	A3:1		D[25]	39	D3:1
	A[24]	111	A3:0		D[24]	38	D3:0
	A[23]	110	A2:7		D[23]	37	D2:7
	A[22]	109	A2:6		D[22]	35	D2:6
	A[21]	108	A2:5		D[21]	34	D2:5
	A[20]	107	A2:4		D[20]	33	D2:4
	A[19]	106	A2:3		D[19]	28	D2:3
	A[18]	101	A2:2		D[18]	27	D2:2
	A[17]	100	A2:1		D[17]	26	D2:1
	A[16]	99	A2:0		D[16]	25	D2:0
	A[15]	98	A1:7		D[15]	24	D1:7
	A[14]	97	A1:6		D[14]	23	D1:6
	A[13]	96	A1:5		D[13]	22	D1:5
	A[12]	95	A1:4		D[12]	21	D1:4
	A[11]	94	A1:3		D[11]	16	D1:3
	A[10]	89	A1:2		D[10]	15	D1:2
	A[9]	88	A1:1		D[9]	14	D1:1
	A[8]	87	A1:0		D[8]	13	D1:0
	A[7]	86	A0:7		D[7]	12	D0:7
	A[6]	85	A0:6		D[6]	11	D0:6
	A[5]	84	A0:5		D[5]	10	D0:5
	A[4]	83	A0:4		D[4]	9	D0:4
	A[3]	82	A0:3		D[3]	4	D0:3
	A[2]	77	A0:2		D[2]	3	D0:2
	A[1]	76	A0:1		D[1]	2	D0:1
	A[0]	75	A0:0		D[0]	1	D0:0
Control	MAS1	74	C2:7	Misc.	MCLK	123	Clock0
	MAS0	73	C2:6		APE	121	Clock1
	ABORT	122	C2:3		DBE	36	C3:2
	nRW	62	C2:4		ABE	72	C3:1
	CLF	60	C2:1		CONFIG	57	C2:5
	nMREQ	58	C2:2		nPWRSLP	140	C3:6
Intrpts	nFIQ	143	C3:4	Clock0	MCLK	123	Clock0
	nIRQ	144	C3:5	Clock1	APE	121	Clock1
				Clock2	CLK2	unused	unused
				Clock3	nRESET	141	Clock3

## NEX-SA110 Mictor Pinout

Tek Mictor Pin #	AMP Mictor Pin #	TLA Channel	SA110 Pin #	SA110 Signal	Tek Mictor Pin #	AMP Mictor Pin #	TLA Channel	SA110 Pin #	SA110 Signal
3	5	CK0	123	MCLK	36	6	CK1	121	APE
4	7	A3:7	120	A31	35	8	A1:7	98	A15
5	9	A3:6	119	A30	34	10	A1:6	97	A14
6	11	A3:5	118	A29	33	12	A1:5	96	A13
7	13	A3:4	117	A28	32	14	A1:4	95	A12
8	15	A3:3	116	A27	31	16	A1:3	94	A11
9	17	A3:2	115	A26	30	18	A1:2	89	A10
10	19	A3:1	112	A25	29	20	A1:1	88	A9
11	21	A3:0	111	A24	28	22	A1:0	87	A8
12	23	A2:7	110	A23	27	24	A0:7	86	A7
13	25	A2:6	109	A22	26	26	A0:6	85	A6
14	27	A2:5	108	A21	25	28	A0:5	84	A5
15	29	A2:4	107	A20	24	30	A0:4	83	A4
16	31	A2:3	106	A19	23	32	A0:3	82	A3
17	33	A2:2	101	A18	22	34	A0:2	77	A2
18	35	A2:1	100	A17	21	36	A0:1	76	A1
19	37	A2:0	99	A16	20	38	A0:0	75	A0

### Mictor Group A

Tek Mictor Pin #	AMP Mictor Pin #	TLA Channel	SA110 Pin #	SA110 Signal	Tek Mictor Pin #	AMP Mictor Pin #	TLA Channel	SA1X0 Pin #	SA110 Signal
3	5	CK3	141	nRESET	36	6	Q1		unused
4	7	C3:7	unused	unused	35	8	C1:7		unused
5	9	C3:6	140	nPWRSLP	34	10	C1:6		unused
6	11	C3:5	144	nIRQ	33	12	C1:5		unused
7	13	C3:4	143	nFIQ	32	14	C1:4		unused
8	15	C3:3	61	LOCK	31	16	C1:3		unused
9	17	C3:2	36	DBE	30	18	C1:2		unused
10	19	C3:1	72	ABE	29	20	C1:1		unused
11	21	C3:0	unused	unused	28	22	C1:0		unused
12	23	C2:7	74	MAS1	27	24	C0:7		unused
13	25	C2:6	73	MAS0	26	26	C0:6		unused
14	27	C2:5	57	CONFIG	25	28	C0:5		unused
15	29	C2:4	62	nRW	24	30	C0:4		unused
16	31	C2:3	122	ABORT	23	32	C0:3		unused
17	33	C2:2	58	nMREQ	22	34	C0:2		unused
18	35	C2:1	60	CLF	21	36	C0:1		unused
19	37	C2:0	127	nWAIT	20	38	C0:0		unused

### Mictor Group C

## NEX-SA110 Mictor Pinout (cont'd)

Tek Mictor Pin #	AMP Mictor Pin #	TLA Channel	SA110 Pin #	SA110 Signal	Tek Mictor Pin #	AMP Mictor Pin #	TLA Channel	SA110 Pin #	SA110 Signal
3	5	Q0	unused	unused	36	6	CK2	unused	unused
4	7	D3:7	47	D31	35	8	D1:7	24	D15
5	9	D3:6	46	D30	34	10	D1:6	23	D14
6	11	D3:5	45	D29	33	12	D1:5	22	D13
7	13	D3:4	44	D28	32	14	D1:4	21	D12
8	15	D3:3	41	D27	31	16	D1:3	16	D11
9	17	D3:2	40	D26	30	18	D1:2	15	D10
10	19	D3:1	39	D25	29	20	D1:1	14	D9
11	21	D3:0	38	D24	28	22	D1:0	13	D8
12	23	D2:7	37	D23	27	24	D0:7	12	D7
13	25	D2:6	35	D22	26	26	D0:6	11	D6
14	27	D2:5	34	D21	25	28	D0:5	10	D5
15	29	D2:4	33	D20	24	30	D0:4	9	D4
16	31	D2:3	28	D19	23	32	D0:3	4	D3
17	33	D2:2	27	D18	22	34	D0:2	3	D2
18	35	D2:1	26	D17	21	36	D0:1	2	D1
19	37	D2:0	25	D16	20	38	D0:0	1	D0

### Mictor Group D

## SA110 Compression Pinout

Pad P3-PH2	Input	SA110 Pin #	SA110 Signal Name
A15	CK0-	Gnd	Gnd
A13	CK0+	123	MCLK
B12	A3:7	120	A31
B10	A3:6	119	A30
A12	A3:5	118	A29
A10	A3:4	117	A28
B9	A3:3	116	A27
B7	A3:2	115	A26
A9	A3:1	112	A25
A7	A3:0	111	A24
B6	A2:7	110	A23
B4	A2:6	109	A22
A6	A2:5	108	A21
A4	A2:4	107	A20
B3	A2:3	106	A19
B1	A2:2	101	A18
A3	A2:1	100	A17
A1	A2:0	99	A16

Pad P3-PH1	Input	SA110 Pin #	SA110 Signal Name
A15	Q0-		
A13	Q0+	unused	unused
B12	D3:7	47	D31
B10	D3:6	46	D30
A12	D3:5	45	D29
A10	D3:4	44	D28
B9	D3:3	41	D27
B7	D3:2	40	D26
A9	D3:1	39	D25
A7	D3:0	38	D24
B6	D2:7	37	D23
B4	D2:6	35	D22
A6	D2:5	34	D21
A4	D2:4	33	D20
B3	D2:3	28	D19
B1	D2:2	27	D18
A3	D2:1	26	D17
A1	D2:0	25	D16

Pad P2-PH2	Input	SA110 Pin #	SA110 Signal Name
A15	CK1-		
A13	CK1+	121	APE
B12	A1:7	98	A15
B10	A1:6	97	A14
A12	A1:5	96	A13
A10	A1:4	95	A12
B9	A1:3	94	A11
B7	A1:2	89	A10
A9	A1:1	88	A9
A7	A1:0	87	A8
B6	A0:7	86	A7
B4	A0:6	85	A6
A6	A0:5	84	A5
A4	A0:4	83	A4
B3	A0:3	82	A3
B1	A0:2	77	A2
A3	A0:1	76	A1
A1	A0:0	75	A0

Pad P2-PH1	Input	SA110 Pin #	SA110 Signal Name
A15	CK2-		
A13	CK2+	unused	unused
B12	D1:7	24	D15
B10	D1:6	23	D14
A12	D1:5	22	D13
A10	D1:4	21	D12
B9	D1:3	16	D11
B7	D1:2	15	D10
A9	D1:1	14	D9
A7	D1:0	13	D8
B6	D0:7	12	D7
B4	D0:6	11	D6
A6	D0:5	10	D5
A4	D0:4	9	D4
B3	D0:3	4	D3
B1	D0:2	3	D2
A3	D0:1	2	D1
A1	D0:0	1	D0

Pad P1-PH2	Input	SA110 Pin #	SA110 Signal Name
A15	CK3-		
A13	CK3+	141	nRESET
B12	C3:7	unused	unused
B10	C3:6	140	nPWRSLP
A12	C3:5	144	nIRQ
A10	C3:4	143	nFIQ
B9	C3:3	61	LOCK
B7	C3:2	36	DBE
A9	C3:1	72	ABE
A7	C3:0	unused	unused
B6	C2:7	74	MAS1
B4	C2:6	73	MAS0
A6	C2:5	57	CONFIG
A4	C2:4	62	nRW
B3	C2:3	122	ABORT
B1	C2:2	58	nMREQ
A3	C2:1	60	CLF
A1	C2:0	127	nWAIT

Pad P1-PH1	Input	SA110 Pin #	SA110 Signal Name
A15	Q1-		
A13	Q1+		unused
B12	C1:7		unused
B10	C1:6		unused
A12	C1:5		unused
A10	C1:4		unused
B9	C1:3		unused
B7	C1:2		unused
A9	C1:1		unused
A7	C1:0		unused
B6	C0:7		unused
B4	C0:6		unused
A6	C0:5		unused
A4	C0:4		unused
B3	C0:3		unused
B1	C0:2		unused
A3	C0:1		unused
A1	C0:0		unused

## TLA System Requirements

TLA600 or TLA700 with a minimum of 102 channel acquisition module. Because of the setup/hold specifications of the SA110, support is not available for the DAS9200 or TLA5x0.

## Ordering / Contact Information

**Part Number** NEX-SA110

**Includes:** Software to setup/configure the TLA600/700  
StrongARM SA110 disassembly  
Manual

**Postal:** Nexus Technology, Inc.  
78 Northeastern Blvd. #2  
Nashua, NH 03062

**Telephone:** 877-595-8116

**Fax:** 877-595-8118

**Email:** support@nexustechnology.com  
quotes@nexustechnology.com  
techsupport@nexustechnology.com

**Website:** [www.nexustechnology.com](http://www.nexustechnology.com)

### Placing an Order

Credit Card orders can be placed directly at 877-595-8116.  
Purchase orders can be faxed to 877-595-8118.

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