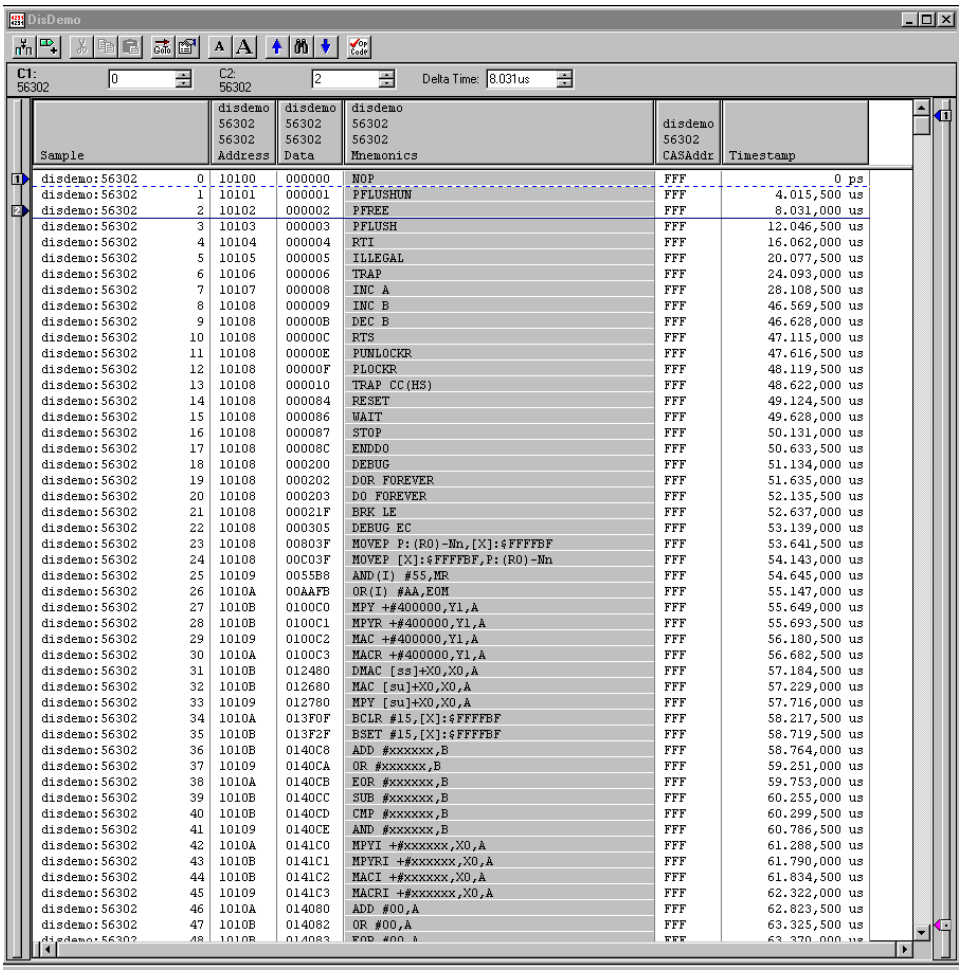
563XX Disassembly Support for Tektronix TLA600 & TLA700 Logic Analyzer

NEX-563XX



Sample	disdemo 56302 56302 Address	disdemo 56302 56302 Data	disdemo 56302 56302 Mnemonics	disdemo 56302 CASAddr	Timestamp
disdemo:56302 0	10100	000000	NOP	FFF	0 ps
disdemo:56302 1	10101	000001	PFLUSHUN	FFF	4.015,500 us
disdemo:56302 2	10102	000002	PFREE	FFF	8.031,000 us
disdemo:56302 3	10103	000003	PFLUSH	FFF	12.046,500 us
disdemo:56302 4	10104	000004	RTI	FFF	16.062,000 us
disdemo:56302 5	10105	000005	ILLEGAL	FFF	20.077,500 us
disdemo:56302 6	10106	000006	TRAP	FFF	24.093,000 us
disdemo:56302 7	10107	000008	INC A	FFF	28.108,500 us
disdemo:56302 8	10108	000009	INC B	FFF	46.569,500 us
disdemo:56302 9	10108	00000B	DEC B	FFF	46.628,000 us
disdemo:56302 10	10108	00000C	RTS	FFF	47.115,000 us
disdemo:56302 11	10108	00000E	PUNLOCKR	FFF	47.616,500 us
disdemo:56302 12	10108	00000F	PLOCKR	FFF	48.119,500 us
disdemo:56302 13	10108	000010	TRAP CC(HS)	FFF	48.622,000 us
disdemo:56302 14	10108	000084	RESET	FFF	49.124,500 us
disdemo:56302 15	10108	000086	WAIT	FFF	49.628,000 us
disdemo:56302 16	10108	000087	STOP	FFF	50.131,000 us
disdemo:56302 17	10108	00008C	ENDDO	FFF	50.633,500 us
disdemo:56302 18	10108	000200	DEBUG	FFF	51.134,000 us
disdemo:56302 19	10108	000202	DOR FOREVER	FFF	51.635,000 us
disdemo:56302 20	10108	000203	DO FOREVER	FFF	52.135,500 us
disdemo:56302 21	10108	00021F	BRK LE	FFF	52.637,000 us
disdemo:56302 22	10108	000305	DEBUG EC	FFF	53.139,000 us
disdemo:56302 23	10108	00803F	MOVEP P:(R0)-Nn,[X]:$FFFFBF	FFF	53.641,500 us
disdemo:56302 24	10108	00C03F	MOVEP [X]:$FFFFBF,P:(R0)-Nn	FFF	54.143,000 us
disdemo:56302 25	10109	0055B8	AND(I) #55,MR	FFF	54.645,000 us
disdemo:56302 26	1010A	00AAFB	OR(I) #AA,EOM	FFF	55.147,000 us
disdemo:56302 27	1010B	0100C0	MPY +#400000,Y1,A	FFF	55.649,000 us
disdemo:56302 28	1010B	0100C1	MPYR +#400000,Y1,A	FFF	55.693,500 us
disdemo:56302 29	10109	0100C2	MAC +#400000,Y1,A	FFF	56.180,500 us
disdemo:56302 30	1010A	0100C3	MACR +#400000,Y1,A	FFF	56.682,500 us
disdemo:56302 31	1010B	012480	DMAC [ss]+X0,X0,A	FFF	57.184,500 us
disdemo:56302 32	1010B	012680	MAC [su]+X0,X0,A	FFF	57.229,000 us
disdemo:56302 33	10109	012780	MPY [su]+X0,X0,A	FFF	57.716,000 us
disdemo:56302 34	1010A	013F0F	BCLR #15,[X]:$FFFFBF	FFF	58.217,500 us
disdemo:56302 35	1010B	013F2F	BSET #15,[X]:$FFFFBF	FFF	58.719,500 us
disdemo:56302 36	1010B	0140C8	ADD #xxxxxx,B	FFF	58.764,000 us
disdemo:56302 37	10109	0140CA	OR #xxxxxx,B	FFF	59.251,000 us
disdemo:56302 38	1010A	0140CB	EOR #xxxxxx,B	FFF	59.753,000 us
disdemo:56302 39	1010B	0140CC	SUB #xxxxxx,B	FFF	60.255,000 us
disdemo:56302 40	1010B	0140CD	CMP #xxxxxx,B	FFF	60.299,500 us
disdemo:56302 41	10109	0140CE	AND #xxxxxx,B	FFF	60.786,500 us
disdemo:56302 42	1010A	0141C0	MPYI +#xxxxxx,X0,A	FFF	61.288,500 us
disdemo:56302 43	1010B	0141C1	MPYRI +#xxxxxx,X0,A	FFF	61.790,000 us
disdemo:56302 44	1010B	0141C2	MACI +#xxxxxx,X0,A	FFF	61.834,500 us
disdemo:56302 45	10109	0141C3	MACRI +#xxxxxx,X0,A	FFF	62.322,000 us
disdemo:56302 46	1010A	014080	ADD #00,A	FFF	62.823,500 us
disdemo:56302 47	1010B	014082	OR #00,A	FFF	63.325,500 us
disdemo:56302 48	1010B	014083	EOR #00,A	FFF	63.370,000 us

- Quick setup of the Logic Analyzer
- Disassembly of the acquired 563XX data
- Support for 18-bit and 24-bit Address Bus
- Custom clocking or Clock on every edge
- 8GHz Timing acquisition on every channel

General Description

When installed on the TLA600 or TLA700, the NEX-563XX software provides quick and easy setup of the TLA600/700 and disassembly of the acquired 563XX data.
The NEX-563XX support is software only. Please see below for information on probing.

Connecting the TLA600/700 to a 563XX 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 563XX signals to Mictor connectors or Compression Pads if the NEX-563XX support is going to be used. Table 2 shows this pinout.

Clips for connecting to the 563XX

If a clip is needed to connect the TLA600/700 logic analyzer to the 563XX 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.nexustechnology.com.

Disassembly Features

Supports Parallel and Non-parallel instructions.

Addressing modes supported

- Register Direct
- Address Register Indirect
- PC Relative
- Special Addressing Modes

NOTE: Special Addressing modes include: Immediate Data, Immediate Short Data, Absolute Address, Absolute Short Address, Short Jump Address, I/O Short Address, Implicit Reference.

Instructions supported

- Data Move Instructions
- X Memory Data Moves
- X Memory and Register Data Moves
- Y Memory Data Moves
- Y Memory and Register Data Moves
- Long Data Memory Move
- XY Memory Data Move

Disassembly Features (Cont'd)

Parallel Instructions

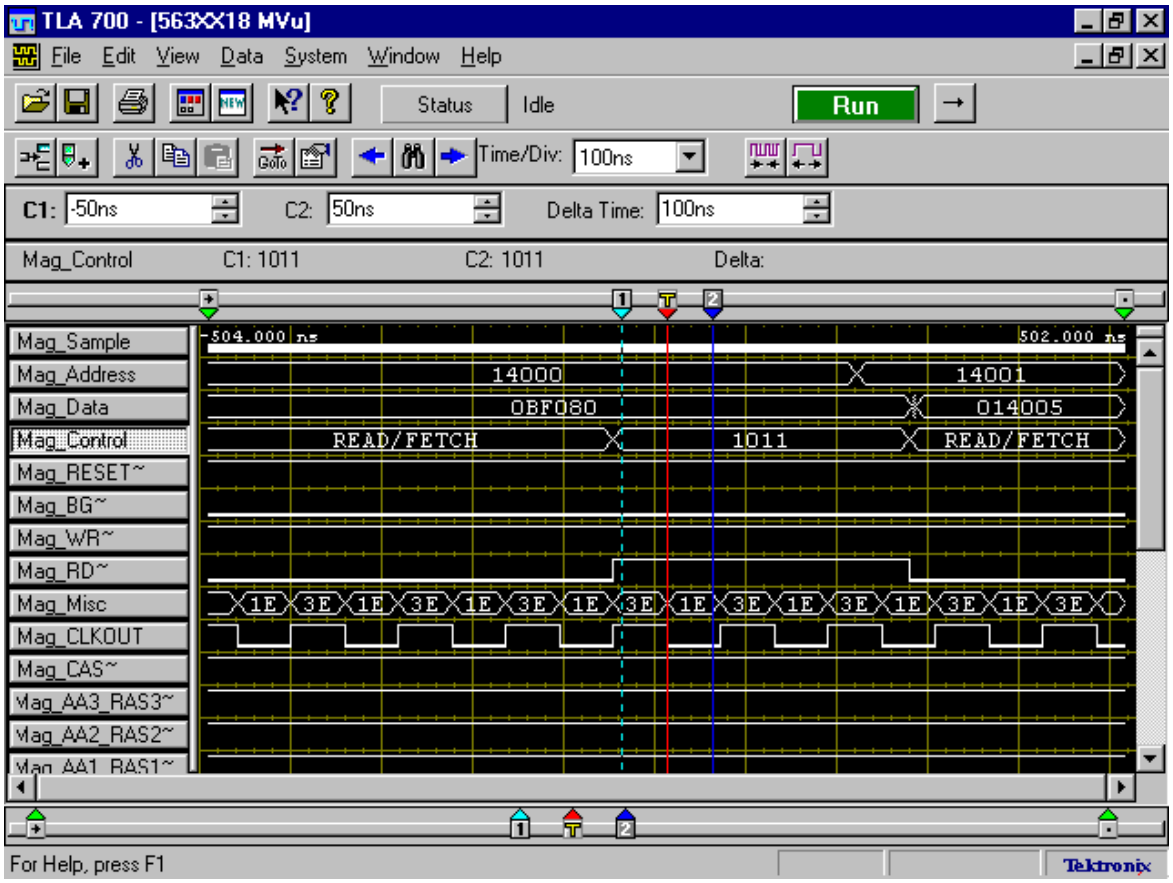
- ABS D
- ADC S,D
- ADD S,D
- ADDL S,D
- ADDR S,D
- AND S,D
- ASL D
- ASR D
- CLR D
- CMP S1,S2
- CMPM S1,S2
- EOR S,D
- LSL D
- LSR D
- MAX A,B
- MAXM A,B
- MAC (+-)
- MACR (+-)
- MOVE(NOP)
- MPY (+-)S1,S2,D
- MPYR (+-)
- NEG D
- NOT D
- OR S,D
- RND D
- ROL D
- ROR D
- SBC S,D
- SUB S,D
- SUBL S,D
- SUBR S,D
- TFR S,D
- TST S

Other Instructions

- BSCLR
- BSET
- BSR
- BSSET
- BTST
- CLB
- CMP
- CMPU
- DEBUG
- DEC
- DIV
- DMAC
- DO
- DO FOREVER
- DOR
- DOR FOREVER
- ENDDO
- EOR
- EXTRACT
- EXTRACTU
- Ifcc
- ILLEGAL
- INC
- INSERT
- Jcc
- JCLR
- JMP
- JScc
- JSCL
- JSET
- JSR
- JSSET
- LRA
- LSLLSR
- LUA
- MAC
- MERGE
- MOVE
- MOVEP
- MPY
- NORM
- WAIT
- OR
- PFLUSH
- PFLUSHUN
- PFREE
- PLOCKR
- PUNLOCK
- REP
- RESET
- RTI
- RTS
- STOP
- SUB
- Tcc
- TRAP

Disassembly Features (Cont'd)

8-bit fetches are not disassembled at this time.



Timing Display

563XX TLA600/700 Wiring

Group Name	Signal Name	TLA input	Group Name	Signal Name	TLA input
Address	A[23]	A2:7	Data	D[23]	D2:7
	A[22]	A2:6		D[22]	D2:6
	A[21]	A2:5		D[21]	D2:5
	A[20]	A2:4		D[20]	D2:4
	A[19]	A2:3		D[19]	D2:3
	A[18]	A2:2		D[18]	D2:2
	A[17]	A2:1		D[17]	D2:1
	A[16]	A2:0		D[16]	D2:0
	A[15]	A1:7		D[15]	C1:7
	A[14]	A1:6		D[14]	C1:6
	A[13]	A1:5		D[13]	C1:5
	A[12]	A1:4		D[12]	C1:4
	A[11]	A1:3		D[11]	C1:3
	A[10]	A1:2		D[10]	C1:2
	A[9]	A1:1		D[9]	C1:1
	A[8]	A1:0		D[8]	C1:0
	A[7]	A0:7		D[7]	C0:7
	A[6]	A0:6		D[6]	C0:6
	A[5]	A0:5		D[5]	C0:5
	A[4]	A0:4		D[4]	C0:4
	A[3]	A0:3		D[3]	C0:3
	A[2]	A0:2		D[2]	C0:2
	A[1]	A0:1		D[1]	C0:1
	A[0]	A0:0		D[0]	C0:0
Control	RESET~	C2:0	CASAddr	CAS11	D1:3
	MAS0	C2:3		CAS10	D1:2
	ABORT	C2:2		CAS9	D1:1
	nRW	C2:1		CAS8	D1:0
				CAS7	D0:7
				CAS6	D0:6
				CAS5	D0:5
				CAS4	D0:4
NoGroup	RASBIT3	D1:7		CAS3	D0:3
	RASBIT2	D1:6		CAS2	D0:2
	RASBIT1	D1:5		CAS1	D0:1
	RASBIT0	D1:4		CAS0	D0:0
Misc.	CLKOUT		Clock0	AA0_RAS0~	Clock0
	CAS~		Clock1	AA1_RAS1~	Clock1
	AA3_RAS3~		Clock2	CAS~	Clock2
	AA2_RAS2~		Clock3	CLKOUT	Clock3
	AA1_RAS1~		Qual0	AA2_RAS2~	Qual0
	AA0_RAS0~		Qual1	AA3_RAS3~	Qual1

NEX-563XX Mictor Pinout

Tek Mictor Pin #	AMP Mictor Pin #	TLA Channel	563XX Signal	Tek Mictor Pin #	AMP Mictor Pin #	TLA Channel	563XX Signal
3	5	CK0	AA0_RAS0~	36	6	CK1	AA1_RAS1~
4	7	A3:7	unused	35	8	A1:7	A15
5	9	A3:6	unused	34	10	A1:6	A14
6	11	A3:5	unused	33	12	A1:5	A13
7	13	A3:4	unused	32	14	A1:4	A12
8	15	A3:3	unused	31	16	A1:3	A11
9	17	A3:2	unused	30	18	A1:2	A10
10	19	A3:1	unused	29	20	A1:1	A9
11	21	A3:0	unused	28	22	A1:0	A8
12	23	A2:7	A23	27	24	A0:7	A7
13	25	A2:6	A22	26	26	A0:6	A6
14	27	A2:5	A21	25	28	A0:5	A5
15	29	A2:4	A20	24	30	A0:4	A4
16	31	A2:3	A19	23	32	A0:3	A3
17	33	A2:2	A18	22	34	A0:2	A2
18	35	A2:1	A17	21	36	A0:1	A1
19	37	A2:0	A16	20	38	A0:0	A0

Mictor Group A

Tek Mictor Pin #	AMP Mictor Pin #	TLA Channel	563XX Signal	Tek Mictor Pin #	AMP Mictor Pin #	TLA Channel	563XX Signal
3	5	CK3	CLKOUT	36	6	Q1	AA3_RAS3~
4	7	C3:7	unused	35	8	C1:7	D15
5	9	C3:6	unused	34	10	C1:6	D14
6	11	C3:5	unused	33	12	C1:5	D13
7	13	C3:4	unused	32	14	C1:4	D12
8	15	C3:3	unused	31	16	C1:3	D11
9	17	C3:2	unused	30	18	C1:2	D10
10	19	C3:1	unused	29	20	C1:1	D9
11	21	C3:0	unused	28	22	C1:0	D8
12	23	C2:7	unused	27	24	C0:7	D7
13	25	C2:6	unused	26	26	C0:6	D6
14	27	C2:5	unused	25	28	C0:5	D5
15	29	C2:4	unused	24	30	C0:4	D4
16	31	C2:3	MAS0	23	32	C0:3	D3
17	33	C2:2	ABORT	22	34	C0:2	D2
18	35	C2:1	nRW	21	36	C0:1	D1
19	37	C2:0	RESET~	20	38	C0:0	D0

Mictor Group C

NEX-563XX Mictor Pinout (Cont'd)

Tek Mictor Pin #	AMP Mictor Pin #	TLA Channel	563XX Signal	Tek Mictor Pin #	AMP Mictor Pin #	TLA Channel	563XX Signal
3	5	Q0	AA2_RAS2~	36	6	CK2	CAS~
4	7	D3:7	unused	35	8	D1:7	RASBIT3
5	9	D3:6	unused	34	10	D1:6	RASBIT2
6	11	D3:5	unused	33	12	D1:5	RASBIT1
7	13	D3:4	unused	32	14	D1:4	RASBIT0
8	15	D3:3	unused	31	16	D1:3	CAS11
9	17	D3:2	unused	30	18	D1:2	CAS10
10	19	D3:1	unused	29	20	D1:1	CAS9
11	21	D3:0	unused	28	22	D1:0	CAS8
12	23	D2:7	D23	27	24	D0:7	CAS7
13	25	D2:6	D22	26	26	D0:6	CAS6
14	27	D2:5	D21	25	28	D0:5	CAS5
15	29	D2:4	D20	24	30	D0:4	CAS4
16	31	D2:3	D19	23	32	D0:3	CAS3
17	33	D2:2	D18	22	34	D0:2	CAS2
18	35	D2:1	D17	21	36	D0:1	CAS1
19	37	D2:0	D16	20	38	D0:0	CAS0

Mictor Group D

NEX-563XX Compression Pinout

Pad P3-PH2	Input	563XX Signal Name
A15	CK0-	
A13	CK0+	
B12	A3:7	unused
B10	A3:6	unused
A12	A3:5	unused
A10	A3:4	unused
B9	A3:3	unused
B7	A3:2	unused
A9	A3:1	unused
A7	A3:0	unused
B6	A2:7	A23
B4	A2:6	A22
A6	A2:5	A21
A4	A2:4	A20
B3	A2:3	A19
B1	A2:2	A18
A3	A2:1	A17
A1	A2:0	A16

Pad P3-PH1	Input	563XX Signal Name
A15	Q0-	
A13	Q0+	AA2_RAS2~
B12	D3:7	unused
B10	D3:6	unused
A12	D3:5	unused
A10	D3:4	unused
B9	D3:3	unused
B7	D3:2	unused
A9	D3:1	unused
A7	D3:0	unused
B6	D2:7	D23
B4	D2:6	D22
A6	D2:5	D21
A4	D2:4	D20
B3	D2:3	D19
B1	D2:2	D18
A3	D2:1	D17
A1	D2:0	D16

NEX-563XX Compression Pinout (Cont'd)

Pad P2-PH2	Input	563XX Signal Name
A15	CK1-	
A13	CK1+	AA1_RAS1~
B12	A1:7	A15
B10	A1:6	A14
A12	A1:5	A13
A10	A1:4	A12
B9	A1:3	A11
B7	A1:2	A10
A9	A1:1	A9
A7	A1:0	A8
B6	A0:7	A7
B4	A0:6	A6
A6	A0:5	A5
A4	A0:4	A4
B3	A0:3	A3
B1	A0:2	A2
A3	A0:1	A1
A1	A0:0	A0

Pad P2-PH1	Input	563XX Signal Name
A15	CK2-	
A13	CK2+	CAS~
B12	D1:7	RASBIT3
B10	D1:6	RASBIT2
A12	D1:5	RASBIT1
A10	D1:4	RASBIT0
B9	D1:3	CAS11
B7	D1:2	CAS10
A9	D1:1	CAS9
A7	D1:0	CAS8
B6	D0:7	CAS7
B4	D0:6	CAS6
A6	D0:5	CAS5
A4	D0:4	CAS4
B3	D0:3	CAS3
B1	D0:2	CAS2
A3	D0:1	CAS1
A1	D0:0	CAS0

Pad P1-PH2	Input	563XX Signal Name
A15	CK3-	
A13	CK3+	CLKOUT
B12	C3:7	unused
B10	C3:6	unused
A12	C3:5	unused
A10	C3:4	unused
B9	C3:3	unused
B7	C3:2	unused
A9	C3:1	unused
A7	C3:0	unused
B6	C2:7	unused
B4	C2:6	unused
A6	C2:5	unused
A4	C2:4	unused
B3	C2:3	MAS0
B1	C2:2	ABORT
A3	C2:1	nRW
A1	C2:0	RESET~

Pad P1-PH1	Input	563XX Signal Name
A15	Q1-	
A13	Q1+	AA3_RAS3~
B12	C1:7	D15
B10	C1:6	D14
A12	C1:5	D13
A10	C1:4	D12
B9	C1:3	D11
B7	C1:2	D10
A9	C1:1	D9
A7	C1:0	D8
B6	C0:7	D7
B4	C0:6	D6
A6	C0:5	D5
A4	C0:4	D4
B3	C0:3	D3
B1	C0:2	D2
A3	C0:1	D1
A1	C0:0	D0

TLA600/700 system requirements

TLA600 or TLA700 with a minimum of 102 channel acquisition module.
Support is not available for the DAS9200 or TLA5x0.

Ordering / Contact Information

Part Number NEX-563XX
Includes: Software to setup/configure the TLA600/700Software
NEX-563XX18 18-bit address and NEX-563XX24 24-bit address disassembly software for the TLA600/700 on 3 ½" Diskettes
Manual

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Placing an Order

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