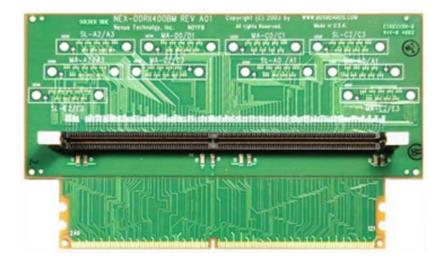


240-pin, DDRII Bus Analysis Probe & Software

# NEX-DDRII400BM



- Acquisition of DDRII 400MT/s Address/Command, Read and Write Data
- Mirror image of NEX-DDRII400 that enables simultaneous monitoring of two, adjacent DDRII DIMM slots
- Quick and easy connection between the DDRII bus and a Tektronix Logic Analyzer
- Extender design does not require a dedicated slot
- Simultaneous acquisition of DDRII Read and Write data
- Selective Clocking provides better utilization of logic analyzer memory by reducing acquisition of Refresh and Idle bus cycles
- Supports 240-pin, unbuffered or registered DDRII SDRAM DIMMs up to 400 MT/s
- Impedance controlled
- Matched trace length design
- No active buffering of the DDR signals
- Accurate 8GHz timing analysis on every channel of the TLA
- Simultaneous state and timing on every channel of the TLA
- Correlate DDRII data with data from other acquisition modules
- Use the TLA's Extended iView capabilities to view any channel on an oscilloscope without re-probing
- Software only support is available for embedded memory designs

### **General Description**

NEX-DDRII400BM allows for the acquisition of Address/Command, Read and Write Data of 240-pin, unbuffered or registered DDRII SDRAM DIMMs up to 400 MT/s

### 8Ghz Timing Analysis available for all DDRII signals

**Oscilloscope Connectivity** on any channel without re-probing via the TLA's Enhanced iView Analog Mux capability

**Selective Clocking** stores data when commands are present and for 13 clock cycles after Column Address Assertion. This results in fewer Idle cycles being stored in acquisition memory.

Pre-Defined Symbols for the following Command Cycles allow for easy Trigger Setup:

- Read Col Address Read
- Write Col Address Write
- Mode Register Set
- Row Address Strobe
- Precharge

- Ignore Command Data
- Burst Stop
- Refresh
- Precharge Select Bank
- No Operation

**No Dedicated Slot Required** – The logic analyzer connects above the normal DIMM height so that there is no interference with adjacent DIMMs.

The following support package(s) are included with this product:

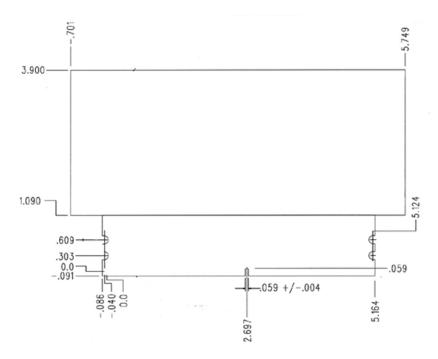
**MDDR2** allows the user to acquire both Read AND Write DDRII data from a target. This support requires 8-P6860 High-Density Compression probes.

### LA Support / Configuration

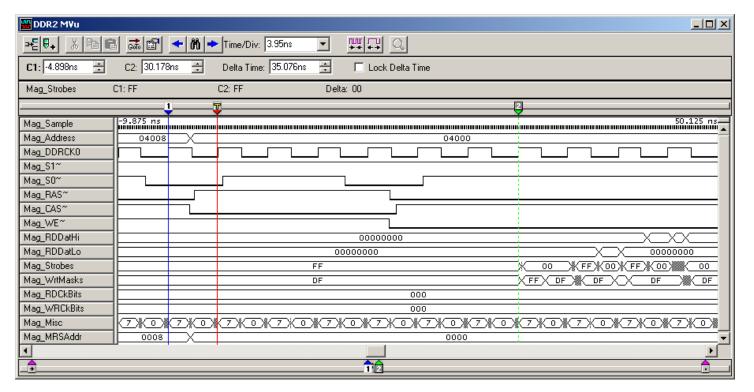
A TLA700 equipped with two, merged, 450MHz state speed acquisition modules (TLA7AA4 or TLA7AB4 cards) are required. When the upper Strobe/Write Mask signals are used as differential strobes (400DDR2S support) 1-P6880 and 7-P6860 probes are required. When the upper Strobe/Write Mask signals are used as Write Masks or single-ended strobes (400DDR2M support) 8-P6860 probes are required.

8GHz MagniVu Timing and Enhanced iView Analog Mux capabilities are available with either configuration.

# **Mechanical Outline**



# **Timing Display**



# State Display

<b>••</b>			13		🕅 🔸 🕺	fop ode	Lock Delta Time				
R2_400	0	DDR2_400	R2_400	DDR2_400	DDR2_400	DDR2_400	DDR2 400	DDR2_400	DDR2_400	[	
Sampl	e	Address	RDDatHi	RDDatLo	WRDatHi	WRDatLo	Mnemonics	Strobes	WrtMasks	Timestamp	
	737		00000000	00000000			READ DATA	FF	DF	12.375 ns	T
	738	04002	00000000	00000000			READ - COL ADDR READ (SO~) READ DATA	FF FF	DF DF	2.625 ns	
	739		00000000	00000000			READ DATA	FF		2.375 ns	
		04000					PRE - PRECHARGE SELECT BANK (SO~)	FF	DF	2.625 ns	
			00000000	00000000			READ DATA	FF	DF	21025 115	
	743		00000000	00000000			READ DATA	FF	DF	7.375 ns	
	744		00000000	00000000			READ DATA	FF	DF	2.750 ns	
	745		00000000	00000000			READ DATA	00	FF	2.250 ns	
	746		00000000	00000000			READ DATA	00	DF	2.625 ns	
		04400					PRE - PRECHARGE SELECT BANK (SD~)	FF	DF	5.325,875 us	
		04008					ACTV - ROW ADDRESS STROBE (SO~) READ - COL ADDR READ (SO~)	FF	DF	709.829,875 us	
	768	04002		00000000			READ - COL ADDR READ (SO~) READ DATA	FF	DF	5.000 ns	
		04002	00000000				READ DATA READ - COL ADDR READ (SO~)	FF	DF DF	12.375 ns 2.625 ns	
	114	04002	00000000	00000000			READ - COL ADDR READ (SO~)	FF		2.625 Hs	
	775		000000000	000000000			READ DATA	FF		2.375 ns	
		04000					PRE - PRECHARGE SELECT BANK (SO~)	FF	DF	2.750 ns	
			00000000	00000000			READ DATA	FF	DF	21/30/13	
	779		00000000	00000000			READ DATA	FF	DF	7.250 ns	
	780		00000000	00000000			READ DATA	FF	DF	2.750 ns	
	781		00000000	00000000			READ DATA	00	FF	2.250 ns	
	782		00000000	00000000			READ DATA	00	DF	2.625 ns	
		04400					PRE - PRECHARGE SELECT BANK (SO~)	FF	DF	19.331,875 us	
		04008					ACTV - ROW ADDRESS STROBE (SO~) READ - COL ADDR READ (SO~)	FF	DF	695.873,250 us	
		04002					READ - COL ADDR READ (SO~)	FF	DF	4.875 ns	
	809		00000000	00000000			READ DATA READ - COL ADDR READ (SO~)	FF	DF	12.375 ns	
	810	04003	00000000	00000000			READ - CUL ADDR READ (SU~) READ DATA	FF	DF DF	2.750 ns	
	811		000000000	00000000			READ DATA	FF		2.250 ns	
		04000					PRE - PRECHARGE SELECT BANK (SO~)	FF	DF	2.250 ris	
			00000000	00000000			READ DATA	FF	DF	217 50 113	
	815		00000000	00000000			READ DATA	FF	DF	7.375 ns	
	816		00000000	00000000			READ DATA	FF	DF	2.625 ns	
	817		00000000	00000000			READ DATA	ÓÓ	FF	2.250 ns	
	818		00000000	00000000			READ DATA	00	DF	2.750 ns	
		04400					PRE - PRECHARGE SELECT BANK (SO~)	FF	DF	12.454,625 us	
		04008					ACTV - ROW ADDRESS STROBE (SO~) READ - COL ADDR READ (SO~)	FF	DF	702.753,000 us	
		04002					READ - COL ADDR READ (SO~)	FF	DF	5.000 ns	
	845		00000000	00000000			READ DATA	FF	DF	12.375 ns	
	846	04003	00000000	00000000			READ - COL ADDR READ (SO~) READ DATA	FF	DF	2.625 ns	
	847		000000000	000000000			READ DATA	FF	DF	2.375 ns	1
		04000					PRE - PRECHARGE SELECT BANK (SD~)	FF		2.375 hs 2.625 hs	
	0.01	0.000					The Theory are beezed build (boily			2.025 115	

Software Mode, Address, Data and Command Cycles Only

# **Ordering / Contact Information**

#### Part Number NEX-DDRII400BM

Includes: NEX- DDRII400BM adapter Software Manual

### Additional software included:

NEX-DDRSPA - TLA Software Plug-In for determining optimum Setup & Hold sample points.

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

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

Website: 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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