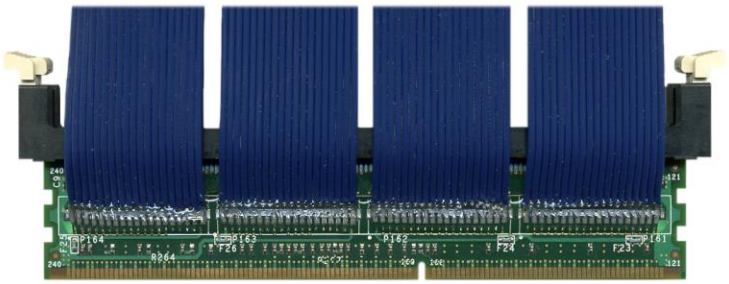
DDR3 DIMM Slot Interposer

Flexible Digital Validation



- High Speed DDR3 Digital Validation
- Passive 240-pin DIMM Slot Interposer
- Supports all speeds of DDR3 up to DDR3-2133+
- Passive 50% Module Reduction w/MR Technology™
- Automated Logic Analyzer Setup
- DDR3 Protocol Violation Analysis
- Supports JEDEC PC3-15000, PC3-12800, PC3-10600, PC3-8500, and PC3-6400 DDR3 modules
- Supports Load Reduced LRDIMM
- NEX-DDR3INTR-XL fully compatible with Nexus Memory Analyzer (MA) Instrument

Passive Module Reduction (MR) Technology™

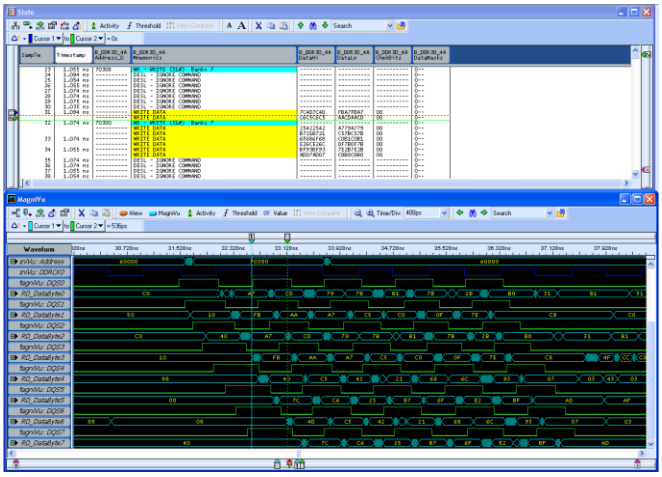
Nexus Technology's Module Reduction Technology™ is available with this interposer. Products implementing MR Technology™ allow for full acquisition, including read and write data, while cutting the hardware requirements in half.

Module Reduction Technology™ is a software solution. No qualifier sideband signals are required and no active circuitry is implemented in MR Technology™ which would otherwise force double-probing and increase the load on the DDR3 target.

Interposer Design

Nexus Technology recommends DDR3 slot interposers for applications where the customer must have the greatest flexibility in the probing of different DDR3 DIMMs. This interposer is an extender design and does not require a dedicated DIMM slot. The logic analyzer connects above the normal DIMM height so that there is no mechanical interference with adjacent DIMMs. This is a passive interposer with no added buffers to conceal system performance.

Performance You Can See™



Software

This DDR3 DIMM slot interposer comes with logic analyzer setup software, DDR3 protocol decode software, DDR3 data eye sample point analysis software, and protocol violation software.

Logic Analyzer Setup Software

The logic analyzer setup software (Tektronix refers to these as 'Support Packages') provides a quick setup of the logic analyzer channels and logic analyzer clocking/acquisition parameters. This software also provides protocol decoding of the DDR3 transactions for easy display and logic analyzer triggering/filtering.

Data Sample Point Analysis Software

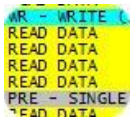
In order for the logic analyzer to capture data, the DDR3 signals must be digitized. For the command and address bus, this process is relatively straightforward as the center of the valid data eyes align with rising edge of the DDR clock. For the DDR3 data bus signals, the process of determining the optimal sample position for digitization is much more complicated. The valid eyes are purposely skewed - as per the DDR3 specification - on a byte basis relative to the DDR clock. The valid eyes also contain skew (again relative to the DDR clock) on a bit basis due to unavoidable artifacts of high-speed designs and the timing variations caused by the digitizing of the signals based on the threshold.

These, among other factors, make reliable and accurate DDR3 read and write data bus acquisition extremely difficult - if done manually. NEX-DDR3-SPA, provided free, automates this process enabling quick and reliable DDR3 read and write data bus acquisition in only minutes. For more information, please see the NEX-DDR3-SPA product for more information.

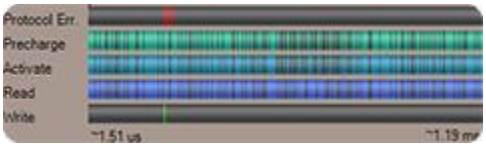
Protocol Violation Software

There's a BIG difference between protocol decode and protocol violation analysis. Protocol decoding provides a static tabulation of command and address bus activity. This functionality is made available through the logic analyzer listing window using a Nexus Technology DDR3 support package/setup software. Performing a very different and powerful set of tasks, protocol violation analysis analyzes the entire logic analyzer memory, compiling statistical information and error reporting based on every command acquired. This provides a global picture of the activity on the bus and - more importantly - analyzes every command to see that the protocol adheres to the JEDEC specification. Please see the NEX-DDR-PROTOCOL product for more information.

Digital Validation



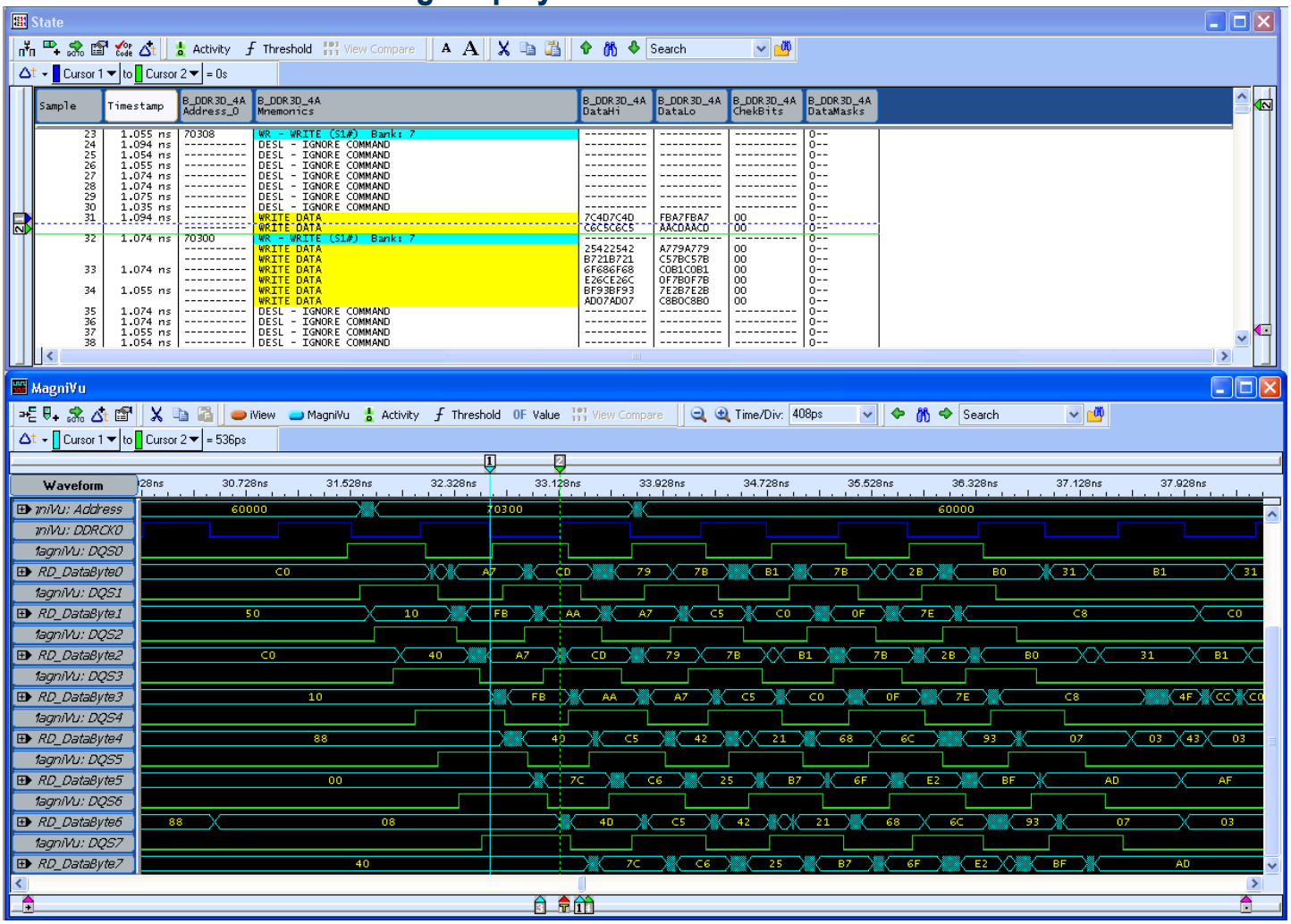
Logic analyzer setup software (TLA support package) is included with these products. This setup software acquires/reconstructs the 1067MHz command/address bus and acquires/reconstructs the 2133MT/s read write data from the data bus. The software also decodes and displays the bus protocol, shows the valid read/write data and provides easy DDR protocol triggering to quickly capture relevant data.



These products also come with the NEX-DDR-PROTOCOL software tool. This software provides statistical information and global bus activity to quickly give the user an overview of the DDR3 bus activity without having to revert to a listing or

waveform window. The software also performs basic protocol violation checking. Advanced protocol violation checking is available for purchase separately. Please see the NEX-DDR-PROTOCOL product for more information on this powerful tool.

Simultaneous State & Timing Display



Hardware/Software Configurations

DDR Speed	Acquisition	Mainframe Required	Module(s) Required	Probes Required**
DDR3>1333	Cmd/Address Read **and** Write	TLA7000	2- TLA7BB4 1.4GHz	1- Nexus NEX-PRB1XL 3- Tektronix P6960HCD
DDR3-1333 DDR3-1067 DDR3-800	Cmd/Address Read **and** Write	TLA7000	1- TLA7BB4 750MHz (or 1.4GHz)	4- Nexus NEX-PRB1XL

**Please note that the NEX-DDR3INTR-HS requires 4- Tektronix P6960HCD probes at DDR3-2133+

Product Configuration Table

Nomenclature	Nexus Probes Included	Nexus Hardware Included	Nexus Software Included
NEX-DDR3INTR-XL	No – Note 1	1 – DDR3 DIMM Slot Interposer	1- TLA Setup & Protocol Decode Support Packages w/MR™ Technology 1- NEX-DDR3SPA Data Threshold & Sample Point Analysis 1- NEX-DDR-PROTOCOL Protocol Violation
NEX-DDR3INTR-XL-PR1	Yes – Note 1	1 – DDR3 DIMM Slot Interposer 1- NEX-PRB1XL	1- TLA Setup & Protocol Decode Support Packages w/MR™ Technology 1- NEX-DDR3SPA Data Threshold & Sample Point Analysis 1- NEX-DDR-PROTOCOL Protocol Violation
NEX-DDR3INTR-XL-PR4	Yes – Note 1	1 – DDR3 DIMM Slot Interposer 4- NEX-PRB1XL	1- TLA Setup & Protocol Decode Support Packages w/MR™ Technology 1- NEX-DDR3SPA Data Threshold & Sample Point Analysis 1- NEX-DDR-PROTOCOL Protocol Violation
NEX-DDR3INTR-HS	No – Note 2	1- DDR3 DIMM Slot Interposer	1- TLA Setup & Protocol Decode Support Packages w/MR™ Technology 1- NEX-DDR3SPA Data Threshold & Sample Point Analysis 1- NEX-DDR-PROTOCOL Protocol Violation

NEX-DDR3INTR-HS-PR2	Yes – Note 2	1- DDR3 DIMM Slot Interposer 4- NEX-PRB1XL	1- TLA Setup & Protocol Decode Support Packages w/MR™ Technology 1- NEX-DDR3SPA Data Threshold & Sample Point Analysis 1- NEX-DDR-PROTOCOL Protocol Violation
NEX-DDR3INTRHS-UPG-MRT	No	None – Note 3	1- TLA Setup & Protocol Decode Support Packages w/MR™ Technology for use with an existing NEX-DDR3INTR-HS(-PR)

Note 1: Four Nexus Technology NEX-PRB1XL probes can be used at/up to DDR3-1333 and can be ordered as a complete package as shown in the table above. One Nexus Technology NEX-PRB1XL probe and three Tektronix P6960HCD probes are required for speeds greater than DDR3-1333 (P6960HCD probes must be purchased from Tektronix).
Note 2: Four Nexus Technology NEX-PRB1XL probes can be used at/up to DDR3-1333 and can be ordered as a complete package as shown in the table above. Four Tektronix P6960HCD probes are required for speeds greater than DDR3-1333 and must be purchased from Tektronix.
Note 3: Proof of purchase of a NEX-DDR3INTR-HS or NEX-DDR3INTR-HS-PR on or before 12/17/2009 necessary to purchase this product. Qualifying customers who purchased a NEX-DDR3INTR-HS or NEX-DDR3INTR-HS-PR on or after 10/1/2009 and on or before 12/23/2009 can obtain this product at no additional charge.

- The NEX-DDR3INTR-XL is fully compatible with Nexus Memory Analyzer (MA) Instrument. Please refer to the NEX-MA4100 product page for more information.
  The MA4100 is part of the Tektronix/Nexus Memory Validation Continuum and enables Execution Validation over long (hours or days) analysis runs. The MA4100 shares an interposer family of 20+ interposer types with the Tektronix 7XXX series of logic analyzers. The Probe Integrated interposers enable all 3 modes of validation with a single slot interposer and single probe load on the target, unique in the industry.

Further Information

Please contact us by telephone, email or mail as listed below. Email is preferred. Normal business hours are 9:00 - 5:00 EST.

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