DDR4 Mixed Signal Oscilloscope (MSO) DIMM Interposer

For use with Tektronix MSO (Mixed Signal Oscilloscope)

- Passive 288 pin DIMM Interposer
  - 284 pin version also available
- Provides quick and easy interface between MSO digital channels and DDR4 DIMM Slot
- Complete solution provides high fidelity analysis of the DDR4 bus while triggering on specific Address / Commands
- Trigger on digital channels and probe/correlate specific channels with oscilloscope inputs
- Combine with Nexus Oscilloscope Component Interposers for ultra high fidelity analog analysis
- Designed for DDR4-3200+

Nexus Technology recommends DDR4 slot interposers for applications where the customer must have the greatest flexibility in the probing of different DDR4 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.

It's a passive interposer with no added buffers to conceal system performance.

Interposer Design

A Mixed Signal Oscilloscope (MSO) is a unique combination of an oscilloscope and digital channels similar to those found on a Logic Analyzer. The digital channels provide the ability to look at a wide bus such as a Memory, Address, or Command bus and trigger on specific commands or addresses. Once triggered, the digital channels are correlated with the oscilloscope channels providing high speed oscilloscope data acquired at the Command/Address trigger point.

The DDR4 MSO DIMM Interposer provides a quick and easy interface between the MSO digital channels and a DDR4 DIMM slot. The intended use of this interposer is to provide DDR4 bus visibility and DDR4 bus triggering of the DDR4 Address/Command bus.

Bus Triggering and Visibility

In general, the DDR4 MSO DIMM Interposer can be used to acquire the Address/Command bus using the MSO digital channels. When used for bus visibility, this quick and easy interface facilitates bus acquisition focused on areas of interest using the MSO digital trigger capability.

Triggering the digital channels on specific Address/Commands is very powerful for visibility of the bus transactions. To accurately analyze the characteristics of a signal, it is recommended that you probe at the memory component. An easy interface to the memory components is provided with Nexus Technology's DDR4 Memory Component Interposers. HTTP://WWW.NEXUSTECHNOLOGY.COM/PRODUCTS/COMPINTR/. This enables analog analysis using the oscilloscope channels of the MSO.

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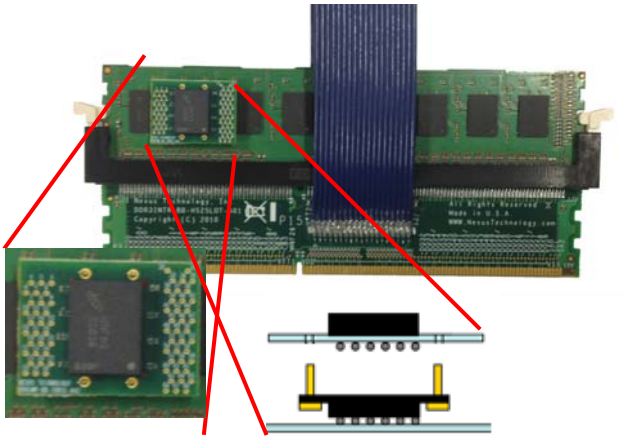
Digital Triggering with Analog Acquisitions at the Memory Component

This uniquely powerful application is achieved by:

1) MSO Digital inputs are connected to the DDR4 MSO DIMM Interposer via quick and easy Digital Channel Interconnects.

2) Access to oscilloscope probe points where high fidelity measurements can be made at the memory component (DDR3 MSO DIMM Interposer show for reference)



Performance you can see

You can trigger on a specific Address/Command and view the analog characteristics of DDR4 signals of interest using the MSO high speed oscilloscope channels. The DDR4 MSO DIMM Interposer easy interconnect and bus event triggered analysis combined with Nexus Technology's Memory Component Interposers enables concentrated debug that was not previously possible.

Figure 1 - MSO Display of the Analog/Oscilloscope DQ and DQS signals triggered on a write command using the digital probing provided by the DDR4 MSO DIMM Interposer

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For use with Tektronix MSO (Mixed Signal Oscilloscope)

Product Configuration

Nomenclature	Description
NEX-DDR4INTR-MSO	284 pin DDR4 MSO Dimm Interposer
NEX-DDR4INTR288-MSO	288 pin DDR4 MSO Dimm Interposer

Product Support

Product Support is critical to your success. Our engineering staff can provide expert training and support tailored to your specific needs. Please contact us by telephone, email or mail as listed below. Normal business hours are 9:00 – 5:00 EDT/EST.

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Tektronix Embedded Systems Tools Partner

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