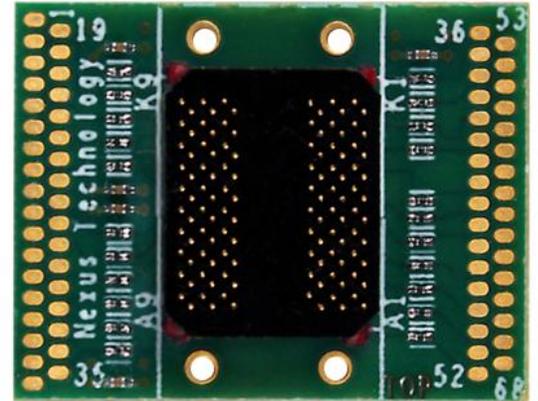# LPDDR (Mobile DDR) Oscilloscope Component Interposers
Low Power DDR (LPDDR or Mobile DDR) Validation

- Optimal analog validation
- Speeds up to LPDDR-400
- Probed at the BGA balls
- Use with existing embedded designs
- Socket design
- Support for LPDDR x16, 60-ball memory devices
- Easy to install
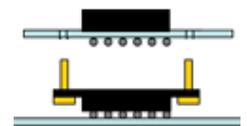- Oscilloscope interposer software

Premier Target Socketed Component Interposer Design

Optimal LPDDR validation requires analysis of the LPDDR signals, as seen by the memory components. This allows for the highest confidence that the signals captured are representative, contain little interference, and present the maximum possible data eye size. Nexus Technology LPDDR component interposers allow for oscilloscope probing of the LPDDR signals extremely close to the memory components.

Probe Installation

The process of attaching the interposer to your target has been greatly simplified using Nexus Technology's patented, high-bandwidth, component interposer sockets. These patented sockets **completely remove the need to contract specialized rework houses** to perform the installation. Instead, our customers can use standard BGA assembly practices to install the component interposer socket. Further, Nexus Technology can perform the attachment service for a nominal fee.


Once the interposer socket is installed on the target, oscilloscope interposers can easily be inserted or removed from the socket. This provides a reusable interface to your target system and completely removes any need to rework customer targets or our component interposers. Note that the interposer socket elevates the interposer above the adjacent BGAs to provide the mechanical clearance necessary for easy probe attachment.

LPDDR BGA Component Installation

A second socket for easy BGA memory component installation is provided on the LPDDR component interposer. This socket is an industry standard 60 pin BGA socket and allows for the quick swapping & testing of different memory components on the interposer. The Sockets Quick Start Guide provides more information and is available on our website.

nexustechnology.com/products/memory/lpddr/compintr/socketed

Oscilloscope Component Interposer Hardware

Connectivity and analysis to an oscilloscope are provided through x16 oscilloscope memory component interposers. These controlled impedance, matched trace length interposers provide visibility up to 400MT/s (LPDDR400) for analog validation using a oscilloscope. All signals are brought out to pads that are designed to accommodate Tektronix solder down probe tips. Probe adapters can also be used to easily move the oscilloscope probe between signals for quick and accurate measurement.
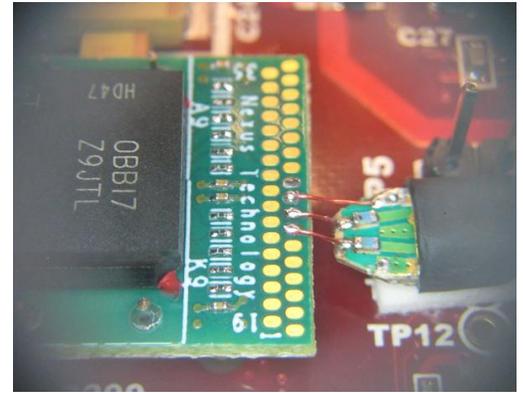
Oscilloscope Analog Validation

Filter software, available from Tektronix for use with select Tektronix oscilloscopes, removes the effect of the oscilloscope interposer. Although these interposers are designed to optimize signal integrity, this feature removes even the slightest effect the adapter has from the oscilloscope display.
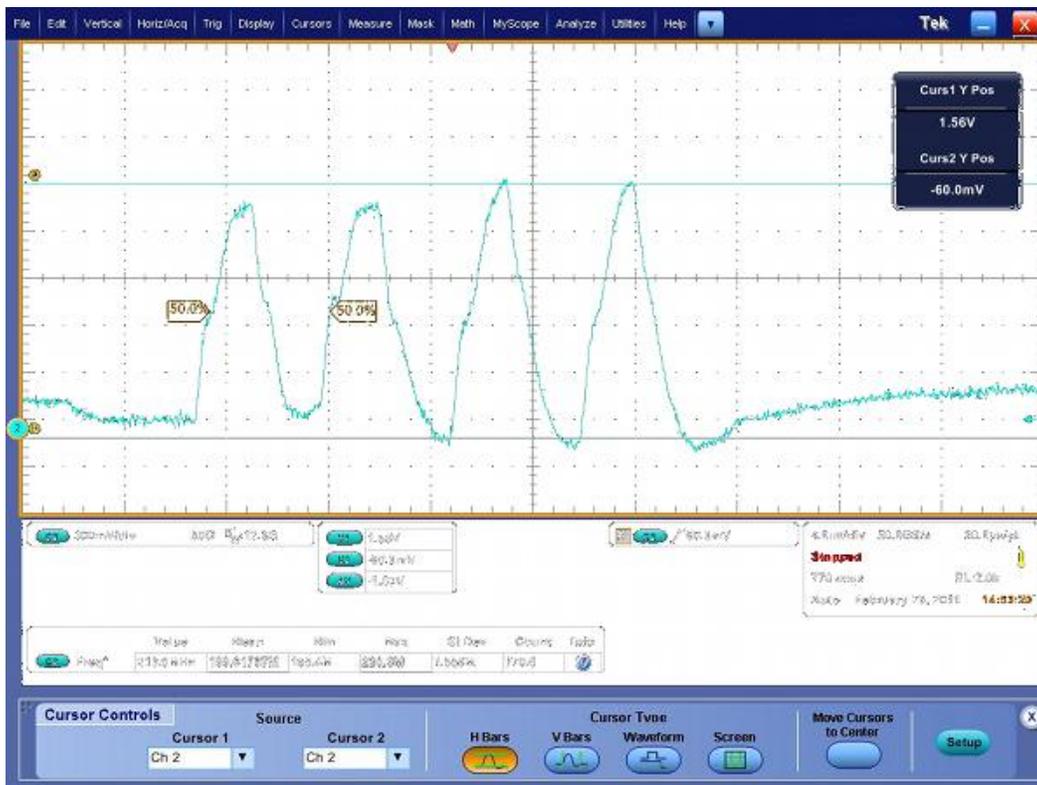
Strobe as Seen using the Oscilloscope Component Interposer

Nexus Technology's Component Interposer Advantages

Probed at the BGA Balls

The best place to probe to eliminate reflections associated with standard embedded LPDDR mid bus probing or other methods. Interposers require no target footprints or special routing requirements that mid-bus probing requires.

Use with Existing Embedded Designs

No need to change existing designs. Simply add the interposer to your embedded target with no re-design or added probe points.

Socket Design

The interposers are reusable. Once an interposer socket is installed, the interposer can be attached and removed by hand - allowing the interposer to be used on multiple targets quickly.

Easy to Install

By either adding the interposer socket using industry standard BGA attachment methods or by using Nexus Technology's attachment service.
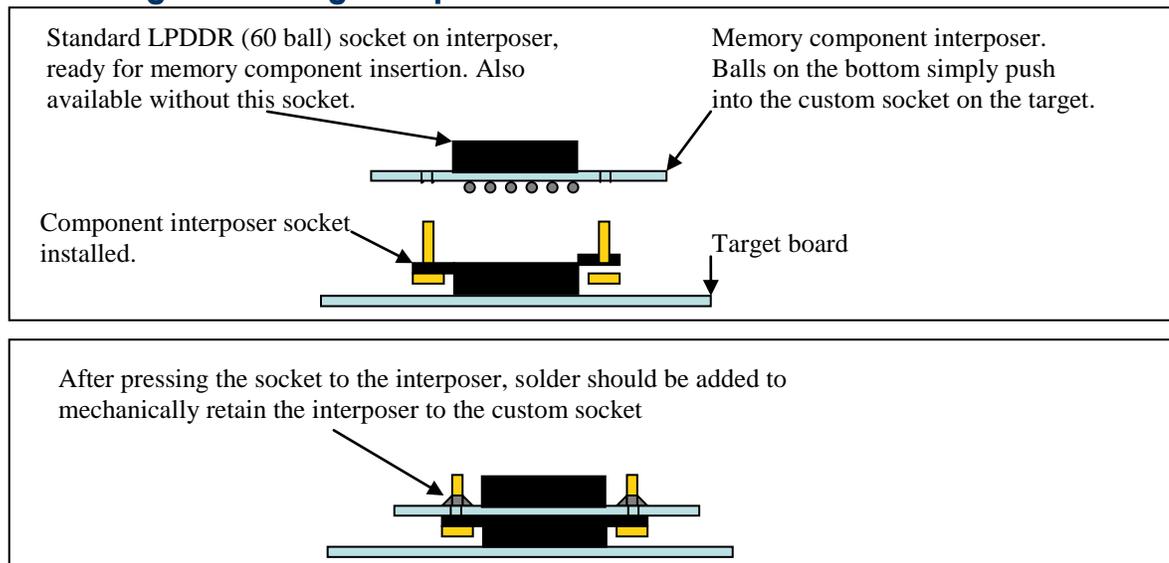
Oscilloscope Interposer Software

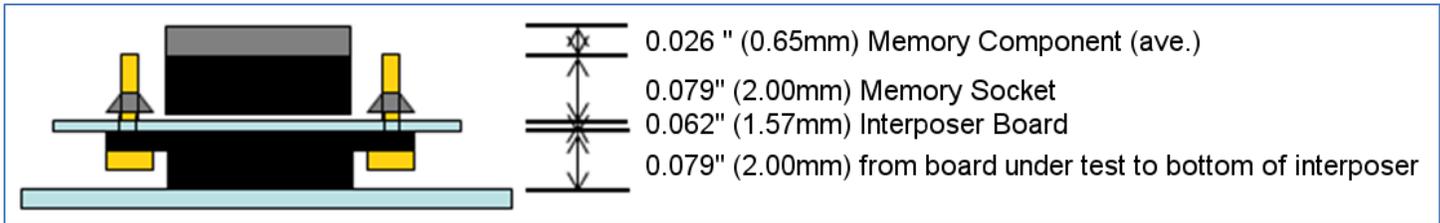Oscilloscope filter software removes effects of the interposer. Available from Tektronix.

Interposer Retention to the Target

The interposer socket has four posts that are soldered to four mounting holes on the interposer. This ensures the interposer will not be mistakenly pulled off the socket attached to the target.
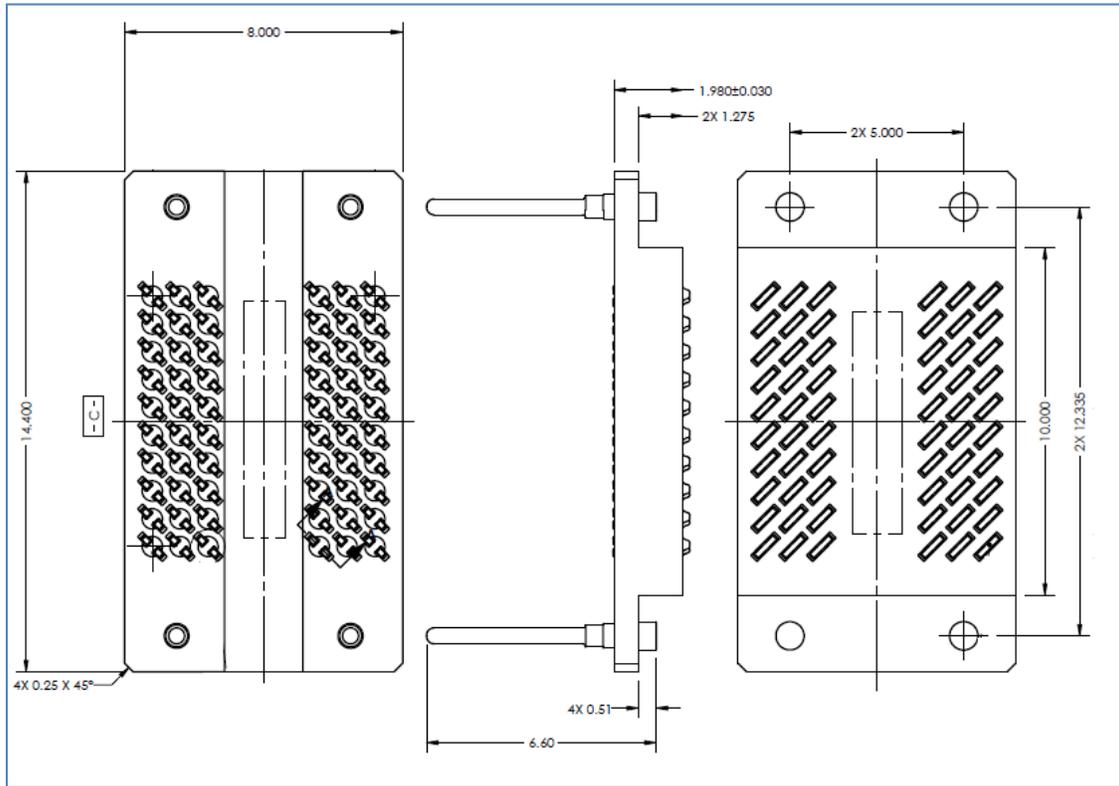
Attaching & Reusing Interposers

Standard LPDDR (60 ball) socket on interposer, ready for memory component insertion. Also available without this socket.

Memory component interposer. Balls on the bottom simply push into the custom socket on the target.

Component interposer socket installed.

Target board

After pressing the socket to the interposer, solder should be added to mechanically retain the interposer to the custom socket

Product Dimensions

0.026 " (0.65mm) Memory Component (ave.)

0.079" (2.00mm) Memory Socket

0.062" (1.57mm) Interposer Board

0.079" (2.00mm) from board under test to bottom of interposer
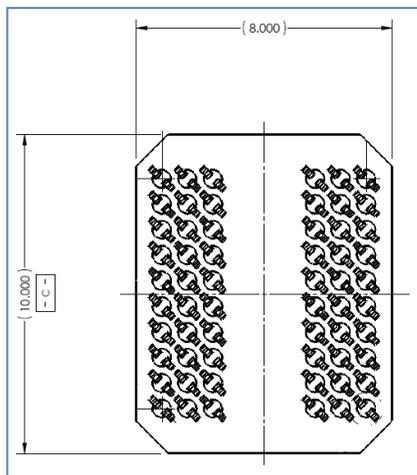
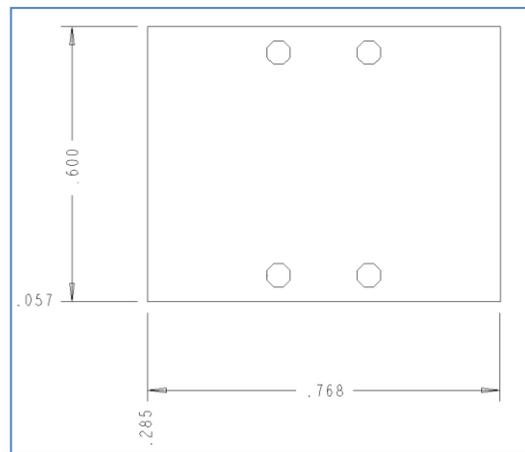LPDDR Full Installation Height

LPDDR x16 Target Socket Dimensions

LPDDR x16 Memory Component Socket Dimensions

LPDDR x16 Interposer Dimensions

nexustechnology.com/products/memory/lpddr/compintr/socketed

Product Configuration Tables

LPDDR Oscilloscope Interposers

Nomenclature	Interposer Type	Data Width	DDR Speed	Component Socket Included	Installation Service Included
NEX-LPDDR1MP60BSCSK	Oscilloscope	x16	LPDDR-400	Yes	No
NEX-LPDDR1MP60BSCSK-AT	Oscilloscope	x16	LPDDR-400	Yes	Yes

Optional Additional Component Interposer Sockets

Nomenclature	Data Width	Solder Balls Added	Quantity of Sockets
NEX-LPDDR60BGASKBA	x16	Yes	1
NEX-LPDDR60BGASKBA-3	x16	Yes	3

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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