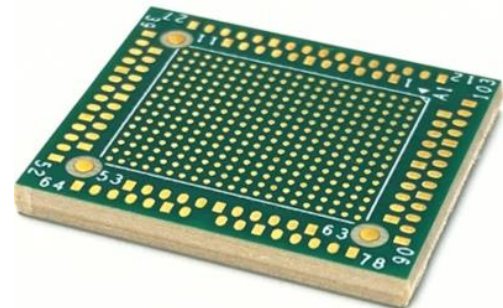


LPDDR5(X) Interposers

315-Ball | Direct Attach | XH Series

OVERVIEW

The LP5-A-CDA-315 interposer enables probing of a LPDDR5/LPDDR5X, 315-ball, 2x16 memory component at the ball grid array (BGA) with an oscilloscope or analyzer.



KEY FEATURES

- LPDDR5 / LPDDR5X, 315-ball, 2x16
- Easily access all signals
- Probe with an oscilloscope or analyzer
- XH Series
- 315-ball, 2x16
- Embedded tap resistors
- Small keep-out volume (KOV)
- Risers available
- Includes s-parameters for system simulation
- Also includes oscilloscope de-embedding s-parameters
- Install with standard BGA rework
- Attachment and analysis services available

BGA INTERPOSER ADVANTAGES

This LPDDR5 BGA interposer provides complete signal access for probing with either an oscilloscope or an MA51x0 series analyzer. The interposer may be used with a riser to elevate the interposer and clear adjacent components. Both the interposer and riser are easy to install using standard BGA rework practices. Or take advantage of Nexus' attachment and testing services.

OSCILLOSCOPES, ANALYZERS, AND PROBES

The oscilloscope requirements will differ based on the frequency content of the LPDDR5(X) bus signals. Bandwidths around 12 – 16 GHz may be a sufficient, general-purpose solution. However, for the highest speeds of LPDDR5X, 16 – 30 GHz bandwidths are required.

This LP5-A-CDA-315 interposer is may also be used with a MA5100 series analyzer to enable advanced oscilloscope cross-triggering, protocol debug, and protocol compliance analysis. A PRB-FL flying-lead probe is required. Alternately, a LP5-D-CDA-315 interposer may be used which provides solder-free, high-density analyzer connections using a PRB-HD-10 analyzer probe.



ATTACHMENT & TESTING SERVICES

The following services are available for this interposer.

ATTACHMENT SERVICE

For each interposer, the *Attachment Service* will install a component to the interposer and the interposer to the target. Other accessories may also be attached.

TARGET BOOT & BASIC FUNCTIONALITY

For each target, this service will power on and ensure functionality of the target after the attachment service is completed.

ADDITIONAL / CUSTOM SERVICE

Additional and custom services are also available. Please contact us for more information.

SIGNAL MAPPING

| Pad # | Signal | Pad # | Signal | Pad # | Signal | Pad # | Signal |
|-------|---------|-------|-----------|-------|--------|-------|-----------|
| 1 | GROUND | 27 | GROUND | 53 | GROUND | 79 | GROUND |
| 2 | DQ2_A | 28 | GROUND | 54 | DQ2_B | 80 | DQ14_A |
| 3 | CS1_A | 29 | DQ14_B | 55 | CS1_B | 81 | RDQS1_t_A |
| 4 | CA2_A | 30 | RDQS1_t_B | 56 | CA2_B | 82 | RDQS1_c_A |
| 5 | CS0_A | 31 | RDQS1_c_B | 57 | CS0_B | 83 | DQ11_A |
| 6 | GROUND | 32 | DQ11_B | 58 | GROUND | 84 | GROUND |
| 7 | CK_c_B | 33 | GROUND | 59 | CK_c_A | 85 | DQ3_A |
| 8 | CK_t_B | 34 | DQ3_B | 60 | CK_t_A | 86 | RDQS0_c_A |
| 9 | CA4_B | 35 | RDQS0_c_B | 61 | CA4_A | 87 | RDQS0_t_A |
| 10 | DQ10_B | 36 | RDQS0_t_B | 62 | DQ10_A | 88 | DQ6_A |
| 11 | GROUND | 37 | DQ6_B | 63 | GROUND | 89 | GROUND |
| 12 | GROUND | 38 | GROUND | 64 | GROUND | 90 | GROUND |
| 13 | DQ1_A | 39 | GROUND | 65 | DQ1_B | 91 | WCK1_t_A |
| 14 | DQ0_A | 40 | WCK1_t_B | 66 | DQ0_B | 92 | WCK1_c_A |
| 15 | DQ7_A | 41 | WCK1_c_B | 67 | DQ7_B | 93 | DQ13_A |
| 16 | CA0_A | 42 | DQ13_B | 68 | CA0_B | 94 | GROUND |
| 17 | GROUND | 43 | GROUND | 69 | GROUND | 95 | DMI1_A |
| 18 | CA1_A | 44 | DMI1_B | 70 | CA1_B | 96 | DQ12_A |
| 19 | RESET_n | 45 | DQ12_B | 71 | CA5_A | 97 | DQ4_A |
| 20 | CA5_B | 46 | DQ4_B | 72 | CA3_A | 98 | DMI0_A |
| 21 | CA3_B | 47 | DMI0_B | 73 | GROUND | 99 | GROUND |
| 22 | GROUND | 48 | GROUND | 74 | CA6_A | 100 | DQ5_A |
| 23 | CA6_B | 49 | DQ5_B | 75 | DQ15_A | 101 | WCK0_c_A |
| 24 | DQ15_B | 50 | WCK0_c_B | 76 | DQ8_A | 102 | WCK0_t_A |
| 25 | DQ8_B | 51 | WCK0_t_B | 77 | DQ9_A | 103 | GROUND |
| 26 | DQ9_B | 52 | GROUND | 78 | GROUND | | |

Figure 1 LP5-A-CDA-315 Signals Probed

DIMENSION DRAWINGS

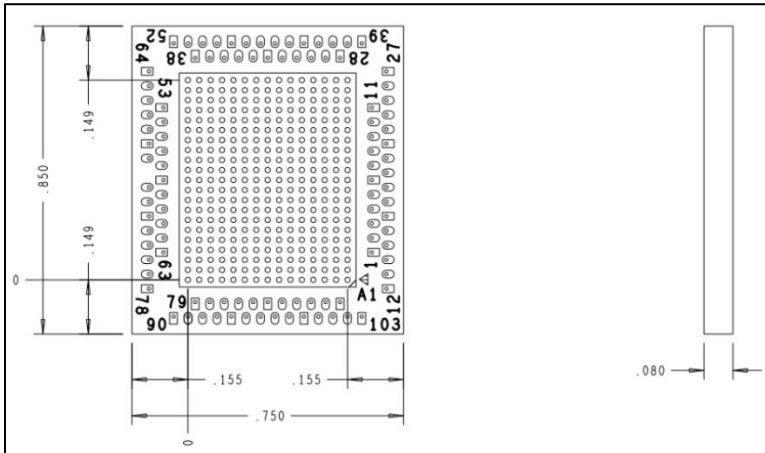


Figure 2 LP5-A-CDA-315 Dimensions

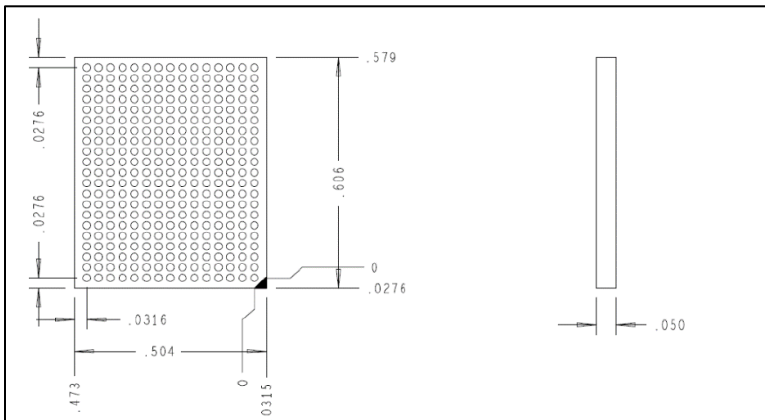


Figure 3 LP5-RSR-315 Dimensions

PRODUCT CONFIGURATION TABLE

| Product Name | Description | Nexus Order Number |
|---------------|--|---------------------|
| LP5-A-CDA-315 | LPDDR5 315-Ball Direct Attach Interposer | NEX-LP5MCI315XHSCDS |
| LP5-RSR-315 | LPDDR5 315-Ball Riser | NEX-RSRLPDDR5315 |



www.nexustechnology.com
support@nexustechnology.com

877-595-8116

603-329-3083 (Outside USA)

78 Northeastern Blvd., Unit 2 Nashua, NH 03062