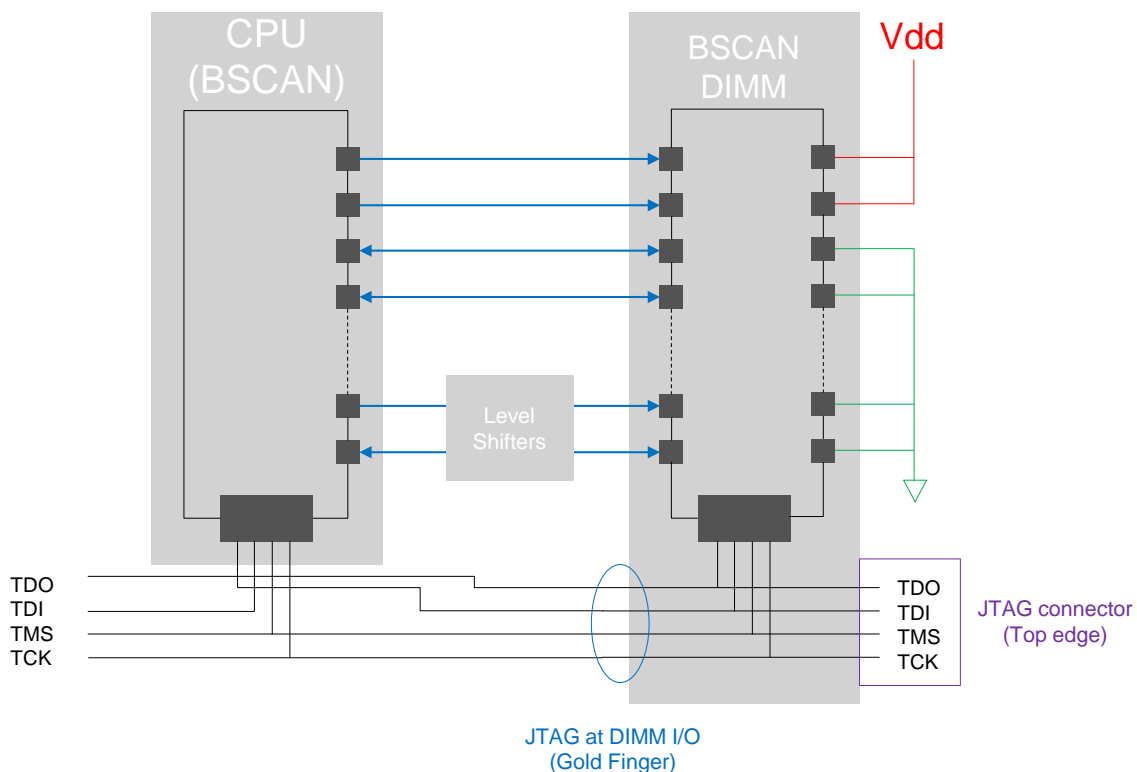


Boundary Scan Test Modules

for DDR4 DIMM Connector

Keysight Boundary Scan DIMM connector test module enables testing the pins of the detecting structural faults on the DIMM connectors of a PCBA. The DIMM connector needs to interface with a boundary scan IEEE 1149.1 compliant IC.

In the example below, the CPU is a boundary scan enabled by the IC interfacing with the DIMM connector.



Benefits

- Easy to use
- Quick test development in minutes using library package
- Fast turn-on and easy debug with x1149 debug tools
- Helps you debug BSDL problem for CPU; for example, swapped cells

Boundary scan DIMM test cards for DDR4

- Test DDR4 memory interface signals to CPU or memory management unit using 1149.1 tests
- Test power and GND pins for the DDR4 connector

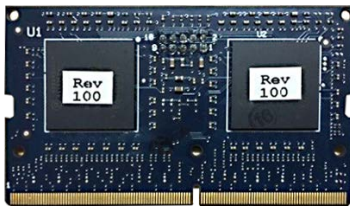
High coverage

- Covers power and ground pins connectivity
- Critical coverage for all ground pins for high-speed signal return for signal integrity
- Failure report pinpoints the failing pin

These DIMM test cards are available in three standard sizes for DDR4 DIMM:

- SODIMM
- Full-Size DIMM
- Mini-DIMM

Moreover, these are available in manual and auto-insert versions for DIMM and SODIMM.



SODIMM – 260 pins



Full-size DIMM – 288 pins



Full size DIMM 288 pins – auto insert



Mini-DIMM – 288 pins



Mini-DIMM 288 pins – auto insert

Available DDR4 test cards

Model	Description	
TSCTK1601	BScan DDR4 SODIMM test card	
TSCTK1802-01 (replaces TSCTK1702)	BScan DDR4 DIMM test card	
TSCTK1802-02 (replaces TSCTK1703)	BScan DDR4 DIMM test card with JTAG signal at DIMM I/O version 1	
TSCTK1802-03	BScan DDR4 DIMM test card with JTAG signal at DIMM I/O version 2	
TSCTK1804-01	BScan DDR4 Mini DIMM test card	
TSCTK1804-02	BScan DDR4 Mini DIMM test card with JTAG signal at DIMM I/O version 1	

JTAG signal – boundary scan DIMM pin mappings

Model Number	Description	Gold Finger (J1) Pin					Ribbon cable connector (J2) Pin										
		144	205	227	230	235	2	4	6	8	9	10	12	14	16	1,3,5,7,11,13,15	
TSCTK1802 Replaced by TSCTK1702-01	BScan DDR4 Full size DIMM test card with no JTAG signals at the gold finger	RFU2	RFU0	RFU1	RFU3/ SAVE_ N	C2											
TSCTK1703 Replaced by TSCTK1802-02	BScan DDR4 Full size DIMM test card with JTAG signals at the gold finger (Pinout Version 1)	TCK	TDI	TDO	TMS	C2											
TSCTK1802-01	BScan DDR4 Full size DIMM test card with no JTAG signals at the gold finger	RFU2	RFU0	RFU1	RFU3/ SAVE_ N	C2	TCK	TMS	TDI	TDO	+2.5V Do not apply power here	+1.2V Do not apply power here			Do not use	GND	
TSCTK1802-02	BScan DDR4 Full size DIMM test card with JTAG signals at the gold finger (Pinout Version 1)	TCK	TDI	TDO	TMS	C2											
TSCTK1802-03	BScan DDR4 Full size DIMM test card with JTAG signals at the gold finger (Pinout Version 2)	TCK	TDI	TDO	RFU3/ SAVE_ N	TMS											

JTAG signal – boundary scan mini DIMM pin mappings

Model number	Description	Gold finger (J1) pin				Ribbon cable connector (J2) pin							
		78	205	217	222	2	4	6	8	9	10	1,3,5,7	
TSCTK1804-01	BScan DDR4 Mini-DIMM test card with no JTAG signals at the gold finger	RFU1	RFU4	RFU5	RFU6								
TSCTK1804-02	BScan DDR4 Mini-DIMM test card with JTAG signals at the gold finger (Pinout Version 1)	TDI	TCK	TMS	TDO	TCK	TMS	TDI	TDO	+2.5V Do not apply power here	+1.2V Do not apply power here	GND	

TSCTK1703 – JTAG signal and DIMM pinout details

JTAG signal	DIMM pin	DIMM signal
TCK	144	RFU2
TMS	230	RFU3 / SAVE_N
TDI	205	RFU0
TDO	227	RFU1

Learn more at: www.keysight.com

For more information on Keysight Technologies' products, applications or services, please contact your local Keysight office. The complete list is available at: www.keysight.com/find/contactus

