JT 2127-Flex series of DIMM Socket Test Modules

Multi-channel digital I/O scan module for JTAG test of DIMM connectors

Key features
- High-density IO module for DIMM Socket testing
- JT 2127/DMU (Digital Master Unit) features 320 DIOS channels
- Measures power rails and tests continuity between socket and PCBA
- Easy connection to UUT via ribbon cables and customised flex adapters
- Flex adapter options include:
  - Flex 204 - 3
  - Flex 244 - mi3
  - Flex 260 - 4
  - Flex 288 - 4

In addition the voltages on the power pins of the DIMM socket are also measured. Currently supported DIMM types are xxx = 204-3, 244-mi3, 260-4 & 288-4. Due to the modularity of this test system other DIMM format can be supported quickly upon request.

Long-standing challenge
The problem of testing memory sockets has always been troublesome for test and production engineers using JTAG/boundary-scan systems. Even when it is possible to create memory writes/reads from a boundary-scan compliant access device on the UUT (Unit Under Test), the initialisation process may fail leaving you with little diagnostics information. What’s more it can still be uncertain whether fault lays with the DIMM module itself or the socket. Using the new JT2127 Flex system from JTAG Technologies you get pin-point diagnostics from a known-good test interface so you can be certain if you socket is soldered correctly.

Modular System
The JT 2127 Flex system comprises two basic elements. a) a high-speed multi-channel IO module – JT 2127/DMU, and b) a personality adapter for the chosen DIMM type – JT 2127/Flex xxx. The combination of the DMU and Flex adapter allows test signals to be sent to and from the boundary-scan source device on the UUT performing a thorough check for open pins and short circuits.

We are boundary-scan.

Ordering Information
- JT 2147/DMU: Socket Test Module digital IO master unit
- JT 2127/Flex xxx: Socket Test Flex Adapter
- JT 2127/xxx: DMU plus Socket Test Flex Adapter

xxx = 204, 244, 260, 288
Easy connection
Supplied ribbon cables allow simple connection from
the DMU master to the individual test adapters which
themselves are equipped with flexi-connect interfaces,
making it easy to plus into most DIMM socket topogra-
phies.

Analog Measurements
The JT 2127-Flex system is equipped with analog mea-
surement channels as well as Digital I/O (continuity test)
channels in order to verify socket supply voltages. These
analog channels connect through to the socket using the
same flexible personality connector as the digital lines.

Representative set-up

<table>
<thead>
<tr>
<th>Region or Country</th>
<th>Telephone</th>
<th>E-mail</th>
</tr>
</thead>
<tbody>
<tr>
<td>North America</td>
<td>Toll free - 877 FOR JTAG</td>
<td><a href="mailto:info@jtag.com">info@jtag.com</a></td>
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</tr>
</tbody>
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Over Voltage Protection
Power Isolation threshold VCC + 0.6 V
From USB 5 V, 500 mA Isolation voltage protection - 0.5 V to +15 V
External 12 V, 2.5 A Overshoot rejection Overshoots less than 400 ns will not result in
OVP isolation
USB Pull-up resistor 20 – 50 Kohm
Speed 480 Mb (non-isolated); 12 Mb (isolated) Other
Galvanic isolation 400 VAC Frequency counter 0 to 200 MHz
TAP Clock generator 0 to 62.5 MHz; step 0.0582 Hz
TCK 1 KHz to 15 MHz Pulse width measurement 4 to 8192 ns; accuracy 1 ns
Voltage range 1.05 V to 3.6 V (5 V tolerant)

ENVIRON MEN TAL
Threshold @ 50% of selected voltage Temperature
Digital I/O Rated range of use 00 C to 600 C
Voltage range 1.05 V to 3.6 V Storage and transport -50 C to 600 C
Output current max ±8 mA @ 3.3 V Relative Humidity
Analog I/O Operating 15% to 90% non-condensing
Voltage range 0 V to 30 V or –15 V to +15 V @ 5 mA max Storage and transport 5% to 95% non-condensing
Resolution 16 bit (0.5 mV) Vibration
Relative fault ±(0.7% + 24 mV) Swept sine resonance search 5 – 55 Hz,
Input impedance 1 Mohm parallel with 100 pF 2 g (ms), 15 min per axis, 10 min resonance dwell
Output impedance 100 Ohm. Dimensions
Sample rate 15 kS/s Weight 161 grams
Slew rate 0.5V/µs Size (L x W x H) 107 x 175 x 18 mm