

Keysight Technologies

The World's Highest Pin Count In-Circuit Test Solutions

Keysight Technologies and Solution Sources Programming

Easily Upgrade to 10,368 ICT Pins on any Keysight i3070 Series 5 or 3070 Series 3

The Keysight Technologies, Inc. i3070 and 3070 are the world's highest pin count in-circuit test (ICT) systems and bring an unprecedented level of performance and portability to the high node count (HNC) test market.

A new high node count adapter, deployed by Solution Sources Programming, allows any Keysight i3070 and 3070 Series 3 or Series 5 four-module in-circuit test (ICT) test system to be upgraded easily to an ultra-high pin count test system with up to 10,368 test pins

The high node count solution consists of an i3070 high node count adapter that doubles the 3070 pin count and advanced high node count software tools to manage test development, debug and run time operations. The result is a solution with 10,368 test pins at a fraction of the cost of buying a new high node test system. By doubling the pin capability of a standard Keysight 3070, the high node count solution re-uses 100% of your existing 3070 investment.

The adapter has been designed to be as convenient to relocate as a test fixture. Equipped with a simple handling and alignment system, it is easily removed from any 3070 or i3070 test system and installed onto another. A new interface, designed to be a "One & Done" connection, eliminates the need for repeated reseating of the fixture to ensure a good connection. This ensures a highly reliable interconnection between the tester and the test fixture.

The Keysight high node count adapter provides exceptional signal integrity. Not only is the measurement superiority of the 3070 test system preserved, but all 3070-family tests can be executed transparently on the high node count adapter. Analog and digital test integrity has been preserved with the adapter design.

- Extends capacity of in-circuit tester to over 10,000 nodes
- Doubles the node count of the Keysight 3070 ICT
- Simple to remove and relocate
- Highly reliable interconnection
- Exceptional signal integrity
- Includes advanced software for development, debug and test
- Compatible with Keysight i3070 and 3070 Series 3 or Series 5



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The adapter utilizes many of the design attributes of the 3070-family itself – there is no wiring inside the adapter; 3070-family switching relays are used for all signal switching; and matched impedances throughout combine to provide reliable, repeatable, low noise signal paths. Path resistance is approximately ½ ohm – less than that of a typical fixture and digital driver overshoot and undershoot have been minimized through the use of matched impedances through the adapter.

The Keysight high node count solution uses innovative proprietary shorts detection algorithms to successfully provide 100% shorts test coverage on all nailed nets.

With a new high node count adapter from Solutions Sources Programming and Keysight you can upgrade any Keysight i3070 Series 5 or 3070 Series 3 in-circuit test system to an ultra-high pin count test system

Success story

Solution Sources Programming has successfully developed and deployed a solution using Keysight's HNC Adapter on an assembly utilizing a dual processor Intel-based design. This printed circuit board assembly had over 10,000 nets with 7,200 of them physically accessible.

Standard Keysight 3070 models would not have been able to capture all nets – even using node-reduction strategies. The HNC Adapter allowed the customer to maintain high coverage due to the increase in tester resources, and ultimately allowed 95.7% coverage of the assembly compared to only 58% on a standard 3070 platform with single fixture.

With only two days added to the development effort, the HNC Adapter had minimal effect on the overall application development time. The tools and macros supplied with the HNC Adapter helped to smooth and maintain standard debug time, which ultimately lead to a successful deployment at the EMS provider in time for the customer's production schedule.

EMS manufacturing technicians and staff were easily trained, as the new requirements to load, unload, and support the HNC Adapter are very similar to standard 3070 fixture support in a production environment.

In this application, Solution Sources Programming was able to utilize Keysight's HNC Adapter to provide 37.7% additional coverage for a large networking assembly without sacrificing development time, test time, and most importantly, quality.

To learn how this solution can address your specific needs please contact

Keysight's solutions partner, Solutions Sources Programming

www.keysight.com/find/solutionsourcesprogramming



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Extending our solutions to meet your needs

Keysight and its Solutions Partners work together to help customers meet their unique challenges, in design, manufacturing, installation or support. To learn more about the program, our partners and solutions go to www.keysight.com/find/solutionspartner

Solution Sources Programming, with over 20 years of experience with Keysight ICT products, can provide professional services and the resources necessary to provide software and fixture development for high node count printed circuit boards for both local and international manufacturers. www.ssprog.com

For information on Keysight products, applications and services, go to www.keysight.com

