

ABOUT RTI



PRODUCT OVERVIEW

PRODUCTS

RTI's products focus on custom test sockets, test fixtures, and turnkey test solutions for integrated circuits, hybrids, and small printed circuit boards.

We provide solutions for failure analysis, package development, prototype engineering, wafer sort, and production test.



TEST SOCKETS

RTI designs and manufactures a large variety of sockets to test integrated circuits and hybrids. The company focuses on providing solutions for unique package types in addition to many standard packages including CSP, LLP, QFN and BGA. RTI has designed and manufactured sockets for 0.3, 0.5, 0.8, 1.0, 1.27 mm and larger pitch packages with pin counts ranging from 3 to 1,400 pins. Some of our offerings include:

- ◆ Strip testing of CSP and LLP packages
- ◆ Kelvin testing (two probes per pkg. pins)
- ◆ CCD (optical) packaged devices
- ◆ Optical Interface Packages
- ◆ In-Vitro Devices
- ◆ Hearing Aids
- ◆ Implantable medical hybrids
- ◆ RF Modules and devices over 10 Ghz
- ◆ Multi-Chip Modules
- ◆ Silicon-on-Silicon
- ◆ Packages with test pads on both top & bottom
- ◆ Packages mounted on 35 mm flex circuits
- ◆ Hybrids with components on both sides
- ◆ Sockets with heat sinks and other mechanical obstructions
- ◆ Sockets with internal filter caps or other passive or active SMT devices

DUT BOARDS

RTI designs and manufactures DUT boards for many types of special-purpose test equipment including: ESD test systems, special-purpose functional testers, automated curve trace equipment, and standard semiconductor test equipment. All designs are performed in-house using PCB design software (Mentor PADS, CAM350) and 3D mechanical design software (Solid Edge) if required. PCB fabrication is sub-contracted to one of our long-time fabrication partners. All boards have a 100% opens and shorts test before assembly. All final assembly and final test is performed in-house. Design features of the DUT boards can include:

- ◆ Multi-layer (up to 32 layers)
- ◆ Controlled impedance
- ◆ Equal line lengths
- ◆ Programming matrix for power and grounds
- ◆ Active and passive components
- ◆ Mechanical interfaces (docking plates, etc)
- ◆ Active switching matrix for increasing pin counts
- ◆ Pogo Pin interfaces
- ◆ Daughter-Mother board configurations
- ◆ Gold and rhodium plating



PRODUCT OVERVIEW

TEST FIXTURES

RTI specializes in providing test fixtures for unique semiconductor and hybrid packages. Our fixtures typically include a custom-designed socket and a custom PCB for interfacing to customer-supplied test equipment. RTI can provide fixtures featuring many custom requirements such as: active electronics, specialized mechanical interfaces, pneumatic placement, multi-cavity sockets, and multi-position fixtures with active switching circuitry. RTI is experienced in designing test fixtures for the following applications:

- ◆ Liquid crystal testing
- ◆ Dual sided test of hybrids
- ◆ Hearing aids
- ◆ Multi-chip hybrids and modules
- ◆ Medical implant hybrids
- ◆ Optical packages
- ◆ CMOS imaging devices
- ◆ Flex circuits
- ◆ Small PCBs
- ◆ Products for aerospace
- ◆ RF modules
- ◆ Custom switch boxes for curve trace

INTERFACE SOLUTIONS

RTI has developed many complete interface solutions, including everything required to interface to third-party test systems. These solutions are semi-custom, meaning we can modify any of them to meet your specific requirements. In most cases these solutions interface to RTI's standard daughter cards and sockets. We are adding new solutions every month, so please call to see if we have already designed an interface solution for your specific requirement.

OTHER PRODUCTS

RTI supplies many other support products for our sockets and test fixtures, including:

- ◆ Switch Boxes and A/B Relay Boxes
- ◆ High-Speed Pogo Pin Cables
- ◆ Custom Socket Receptacles
- ◆ Test Probes
- ◆ Socket Adaptors

RTI has been providing solutions for over 15 years. We are located in Morgan Hill, California, just south of San Jose and Silicon Valley. We have complete in-house design capabilities for PCB and mechanical design. Our fully-equipped CNC machine shop is used for both prototypes and production. Our design team is experienced in all phases of test fixture design, including test sockets, PCB design, and mechanical design.

We specialize in custom solutions. We have designed test fixtures for everything from implant devices to hybrids for satellites, from 2.0 mm square devices to multi-chip silicon-on-silicon hybrids, and everything in-between. We will take the time to fully understand what you are trying to accomplish and then, through innovative design, provide a cost-effective solution. We would welcome the opportunity to provide solutions for your test requirements.