

# Custom Probe Cards

## CUSTOM PROBE CARDS

While Accuprobe has more than one hundred standard probe card designs in stock that can be adapted for a wide range of devices and probing systems, some applications call for custom probe card designs to meet unique test requirements. Accuprobe offers a fast, competitive design and fabrication service for custom designs to be used on first test through volume production.

## UNIQUE REQUIREMENTS

Continuing technology developments combined with the quest for competitive differentiation often leads to the need for unique test environments to prove or verify fundamental design assumptions. Device sizes, pad locations, functionality and associated test criteria can lead to the need for a probe card solution that cannot be met with an off-the-shelf probe card. Often the need is germinated in the requirement to place active and passive components close to the device under test. Other times unique device sizes and geometries, as well as density and number of pin-outs drive the need for a custom platform for device or wafer test.

Accuprobe is quickly able to use its extensive design resources and a wealth of existing probe card designs to create, modify or adapt a probe card to meet unique customer needs.



Customer Probe Card designs

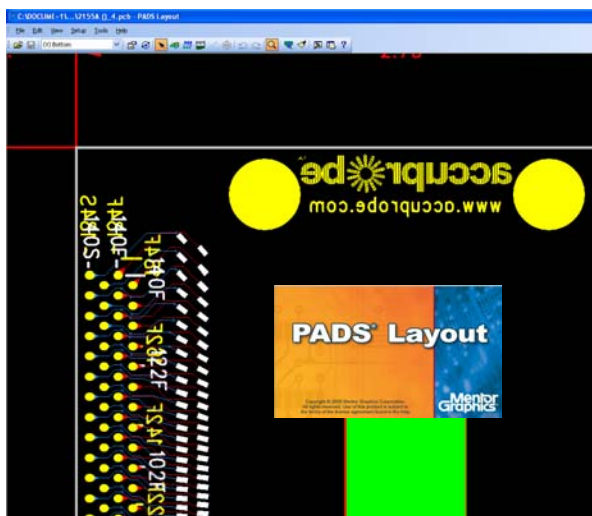
## DESIGN TOOLS AND PLATFORMS

Accuprobe design expertise can be applied to produce custom probe cards, as well as associated cable assemblies and test fixtures. Existing designs are held in CAD format so that they can be quickly and economically adapted to suit a unique requirement. Cards can be produced from simple two sided probe cards to cards with multiple layers, matched impedance signal paths, board-to-board termination and the inclusion of passive and active components. The probe cards can be designed to incorporate epoxy ring or traditional blade probes, including Accuprobe's popular z-adjustable and ceramic blade probes.

Designs are produced using state-of-the-art CAD tools for verification and the creation of production tooling while fast turnaround times are able to be met through use of design resources in the United States and Asia.

## FIXTURES AND INTERFACES

Associated test fixtures, motherboard and interface boards can also be produced. Typically the test fixtures are used for the manual test of devices, including elevated temperature and



PCB Design CAD Tools

# Custom Probe Cards

other environmental tests. Interface and cable assemblies allow the probe card to be interconnected to specific test and verification systems. A wide range of cantilever type probes as well as vertical spring probes can be utilized on existing or custom designed cards to produce the test fixtures. Test posts or cable connectors can be incorporated to interface to the fixture, and designs able to operate in excess of 200°C have been regularly produced.

Internal PCB router and CNC machining equipment at Accuprobe help to ensure fast turnaround of custom test fixture requests. Recent designs have ranged from tens through several hundred test probes on a single fixture. An associated service is the design and manufacture of cable assemblies using Centronics, DIN, Molex and other high density connector types. An advanced automatic cable test system is able to verify the wiring and correctness of the required assembly.



Probe Card Analyzer

## VERIFICATION AND REPAIR SERVICE

Probe cards produced at Accuprobe can be verified using our in-house probe card analyzer system. This system ensures that the card and interface design has been constructed correctly and is able to properly interface to the test instruments.

In the event of damage or wear to the probe card Accuprobe offers a prompt and effective probe card repair service able to adjust or rebuild the probe card and bring it up to near new status.

BITA ELEKTRONIK SVENSKA AB  
POB 3434, SE-10368 STOCKHOLM, Sweden  
Ph. +46 (8) 319000  
Fx. +46 (8) 326064  
Email: [info@bita.se](mailto:info@bita.se)  
[www.bita.se](http://www.bita.se)

**accuprobe**

©2006 Accuprobe, Inc. Specifications may change without notice.  
Accuprobe and the Accuprobe logo are trademarks of Accuprobe, Inc.