



# Agilent's High Speed Physical Layer Characterization and Modeling Service

## Service Data Sheet

R1340A-550

- **Impedance measurements made on high-speed interconnects**
- **SPICE model generation and validation from actual measurements**
- **Frequency-dependent loss modeling, insertion and return loss analysis**

### Service Description

Agilent's High Speed Physical Layer Characterization and Modeling service provides you with the SI data you need to develop new systems in today's high-speed digital world.

### Service Scope

A minimum of two days is required for a qualified Agilent Engineer to complete measurement setups, make the measurements, and compile the SI data. The actual time will be dependent on the scope of the measurements you request. This service is provided either at your site or in an Agilent lab.

An Agilent engineer will setup each measurement using the appropriate test equipment, probe fixtures, probes and probing techniques. After the measurements are made, the Agilent engineer will use software to enhance the measurements, and generate SPICE models of the measured components. The models are validated by directly comparing

the simulation of the model with the actual measurement made. Models can be provided in HSPICE, PSPICE, Berkley SPICE, or IBIS-compatible formats.

Frequency-dependent skin-effect and dielectric-loss transmission-line models can also be created. You can use these models to predict eye-diagram degradation and SI-related digital errors in high-speed interconnects.

Some examples of the high-speed interconnects that can be measured:

- InfiniBand memory interfaces, FibreChannel
- SCSI and ATA storage systems, flexible boards in disk drives
- High-speed Gigabit Ethernet and Sonet/SDH backplanes and connectors
- Firewire and USB2.0 cables and cable assemblies
- ATE test sockets and DUT boards, BGA and chip-scale packages

### Business Need

- Accurate models based on measurements and need to characterize high speed interconnects
- Short lead times
- Cost effective timely Signal integrity data

### What You Will Receive

- A report including the following:
  - How measurements were made
  - Direct measurements results
  - Requested results derived from the measurements
- SPICE models in HSPICE, PSPICE, Berkley SPICE, or IBIS-compatible formats

### What You Will Provide

- Any components or prototype boards needed for the measurements
- Sufficient workspace and power to make the required measurements (if we are working at your site)



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## Ordering Information

Contact your local Agilent sales representative for a custom quote. You can also request a custom quote by calling 800 452-4844 or sending an email to [kso\\_services@agilent.com](mailto:kso_services@agilent.com). Include details of what you want measured and the Signal Integrity data you need. Refer to Product Number R1362A-550.

## [www.agilent.com](http://www.agilent.com)

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Printed in the USA February 10, 2003

5988-7042EN



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