

RESOURCES

*A summary of new products and services
for materials research...*

Wafer Prober Monitoring Software:

Electroglas' SORTview™ tracks one or more probers on the wafer sort floor. Connected to a local area network via a graphical user interface, the product enables users to monitor operational status of the wafer sort test area and take corrective action. Information is communicated and displayed from the sort database or directly from each wafer prober, in real time. Automatic prober monitoring eliminates operator-caused inefficiency on the test floor.

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Materials Optimization Software:

PDA Engineering's M/VISION® software integrates materials information in the manufacturing process. The M/VISION Materials System Builder™ enables users to construct corporate, proprietary materials databanks without database programming. Online databanks for metals, plastics, ceramics, and advanced structural composites also are offered. Materials Evaluator™, a materials selection tool, provides access to any M/VISION materials databank.

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Product Performance Simulation

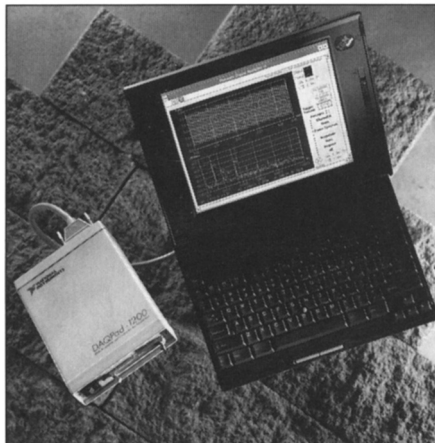
Software: PATRAN 3™ from PDA Engineering integrates CAD, test, and analysis software (customized if desired) in modules that enable users to predict product performance under operating conditions. The optimization module supports more than 500 design variables while optimizing for weight, volume, cost, stress, frequency, and more. A materials selection module provides access to PDA's M/VISION materials databank from within PATRAN 3. Other modules include computational fluid dynamics, thermal, composite, fatigue, finite element analysis, and animation.

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U.S. Government Software Directory:

1994 software directory from National Technical Information Service describes more than 800 programs developed by federal agencies. Applications software, graphics software, software tools, and modeling and simulation programs are featured for fields such as nuclear science and technology, physics, fluid dynamics, biological and medical sciences, structural engineering, computer science, mathematics, industrial engineering, and more.

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▲ **Data Acquisition Systems:** National Instruments offers several types of data acquisition hardware and software, many for laptop or for notebook PCs. The DAQPad-1200, a PC-connectible external multifunction I/O device digitizes signals from eight single-ended or four differential inputs at rates up to 100 kS/s. The SCXI-1000DC, a four-slot DC-powered chassis, can house up to four SCXI modules to condition and acquire up to 128 signals. Free DAQ Designer software configuration tool helps users to customize PC-based systems. FAST-DAQ simplifies data acquisition and features automatic data formatting, ASCII file generation, and storage of all test parameters and data.

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General-Purpose Programming Tool:

National Instruments' LabVIEW offers libraries for data acquisition, instrument control, data analysis, and data presentation. Users build software modules instead of writing text-based programs. Add-on packages extend LabVIEW to accommodate PID algorithm development, joint time-frequency analysis, and more. Applications include process monitoring and control, automated testing, automotive and aerospace engineering, and lab automation. Also available are application notes on programming tools and techniques, a training video, and a technical forum for users to exchange ideas on the Internet. National Instruments' Alliance Program vendors also offer numerous related products designed for use with LabVIEW.

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Calibration Software to Meet ISO 9000:

Blue Mountain Software's Calibration Manager can help users meet recordkeeping requirements for parts of ISO 9000, 9001, 9002, and 9004 guidelines. The software tracks each piece of equipment in a calibration system and automatically calculates due dates. Users can access instrument histories, print customized reports and work orders, or print to calibration forms and stickers. A free demonstration disk is available.

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Engineering Research Tool:

The Ei Reference Desk™ from Engineering Information enables Internet users to locate journal articles and conference papers, or obtain full-text copies of articles. When used with Ei Page One+, which features abstracts in the Windows™ version of the Ei Page One database of tables of contents, access is provided to more than 600,000 references spanning two years of 5,400 journals and titles. More than half of the references have abstracts displayable on screen, within the context of a table of contents.

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Wafer Processing Software:

Asyst Technologies' SMART-Tag™ boosts memory by 400% from 8 to 32 K standard memory, 128 K optional. As part of Asyst's WIP tracking system called SMART-Traveler™, the Tag travels with the wafer cassette, and stores and displays data such as lot/wafer ID, process recipes, wafer lot history, and probe test die bin data. SMART-Tag pilots products by supplying visual directions to the operator and electronic information for gating each process step. The Tag attaches to SMIF-Pods™ or other wafer cassette carriers.

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Wafer Scanning Software:

Large Area Y Scan (LAYS) software from Pacific Scientific's High Yield Technology Division increases measurement speed, sensitivity, and analysis with the company's Optical Precipitate Profiler (OPP) system. The OPP nondestructively images defects as small as 100™, in 90 seconds or less, and can scan an area of silicon (up to 450 μm × 5 mm) parallel to the surface at any depth, providing a 40X improvement in scan volume in 4X the time. Applications include determination of bulk defect density, imaging of critical surface and near-surface defects, and more.

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