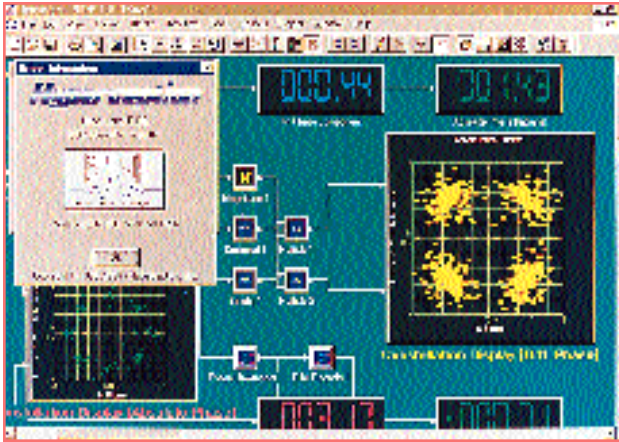


Integrated System for Signal Processing



Hyperception has integrated digital signal-processing hardware, the Bridgenorth BN4000 DSP system board, with its graphical-interface programming software, Hypersignal RIDE 4.0. The integrated system provides a powerful development environment that helps users to make efficient use of the BN4000 board. The BN4000 includes the TMS320C40 floating-point digital signal-processing chip from Texas Instruments, which is designed for numerically intensive data-acquisition and signal-processing applications in an AT-compatible environment. Hypersignal RIDE optimizes the flow of data in the processor and allows users to produce code that is executed completely by it, without intervention from the PC host. The RIDE software takes care of many routine programming tasks, allowing users to focus on developing application-specific algorithms. But RIDE also supports the creation of user-designed blocks of code through Block Wizard, which creates the interface code needed to integrate these blocks with automatically generated code.

Hyperception, Inc.
9550 Skillman LB125
Dallas, TX 75243

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Image/X-Ray Analyzer

AutoSEM1, offered by Advanced Research Instruments, is a PC-based image analyzer for use with the scanning electron microscope. The system, which could be used to

analyze the size and shape of airborne particles, fibers, ceramic or metal powders, or inclusions in metals, automatically analyzes image features such as area, size distribution, or number of features per field, and performs X-ray analysis on features. Dynamic resolution allows for both fast searching and precise feature measurement. AutoSEM1 searches at relatively coarse resolution until a feature is found and then

increases the resolution to measure the feature to a precision specified by the user. Output can be in the form of standard spreadsheets, color-coded X-ray maps of composition, digital images, or inexpensive photo-quality print images.

Advanced Research Instruments Corp.
2434 30th Street
Boulder, CO 80301

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Permanent Magnet

Dexter Magnetic Materials Division, a division of the Dexter Corporation, offers a permanent magnet for use in scientific



and industrial equipment that imposes a field of 2.2 Tesla across an eighth-inch gap. The company says that whereas an electromagnet this strong might weigh as much as 1,000 pounds, its magnet weighs only 5 pounds. The company anticipates that the magnet will allow equipment manufacturers to design portable versions of stationary instruments and to change production-process configurations previously dictated by large, heavy, immovable electromagnets. More information can be found at the company's Web site (www.dextermag.com).

Dexter Magnetic Materials Division
48460 Kato Road
Fremont, CA 94538
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Custom-Made Optics

Opticon Aspheric Optics offers to custom fabricate high-accuracy one-piece aspheric optics. The company makes one-piece optics from aluminum, titanium, copper, ceramics, or composites, with UV, VIS, and IR coatings. Tolerating temperatures from the cryo-



genic to 150° C, the quarter-wave aspheric optics provide positional tolerances as low as 0.025 mm and surface roughnesses as low as 10 Å. They have integral mounts and are prealigned to simplify assembly. The company will make optics in either prototype or production quantities. Literature and quotes are provided on request.

Opticon Corp.
76 Treble Cove Road
North Billerica, MA 01862
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Miniature Spectrometer

MPB Technologies has introduced a handheld optical spectrometer, called IOSPEC, that is suited for applications such as gas detection, water or blood analysis, geological and agricultural services, and pollution or

NEW PRODUCTS



process monitoring. IOSPEC is optimized for the near infrared (1.2 to 3.2 μm) and the mid infrared (2.0 to 5.5 μm) but can operate in the far infrared as well. An IR slab waveguide integrates the input fiber, the optics, and the thermoelectrically cooled detector array. The compact, lightweight package exhibits exceptional optical alignment and vibrational tolerance, the company says. The IOSPEC module can be configured for different spectral ranges and resolution requirements, and customers can also purchase a ruggedized spectrometer system with integral LCD display, 486 microprocessor, data storage, RS232 interface, modem, and handheld controller.

MPB Technologies, Inc.
151 Hymus Boulevard
Pointe Claire, Quebec
Canada H9R 1E9

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Accelerometer

Endevco Corp. announces a lightweight piezoelectric accelerometer with integral electronics that is designed for modal testing in the laboratory or in vehicles or aircraft. Based on Endevco's PIEZITE Type P-8 crystal elements, the Model 63B accelerometer provides high transduction efficiency without sacrificing ruggedness, the company says. The 63B is available in two versions: the 63B-10 has a dynamic range of $\pm 1,500$ g and a voltage sensitivity of 10 mV/g, and the 63B-100 has a dynamic range of ± 50 g and a voltage sensitivity of 100 mV/g. This triaxial accelerometer includes the company's quick-release system, which reduces set-up time and improves mounting accuracy.

Endevco Corp.
30700 Rancho Viejo Road
San Juan Capistrano, CA 92675
Circle No. 185 on Reader Service Card

Ruggedized Laptop

Promark Technology East announces a ruggedized laptop computer that can be used in direct sunlight. The displays of portable computers typically have brightnesses in the range from 100 to 150 NITs

(the standard measure of screen brightness), but Promark's I Series model with the Hi-Bright option has a screen brightness of 500 NITs. The computer, which has been packaged to withstand rain, dust, dirt, oil, rough handling, and vibration and shock, is available with a DX486-100 MHz microprocessor or as a Pentium 100 or 133 MHz model. Memory sizes range from 4 to 64 megabytes, and hard disk capacities from 500 megabytes to 1.2 gigabytes. Promark says the new computer is the fruit of a license agreement with GETAC Corp. (Hsinchu, Taiwan).

Promark Technology East
14100 Laurel Park Drive
Laurel, MD 20707
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New Software

Data-Acquisition Aid

Quatech has released Windows-based data-acquisition software called DaqEZ that is included free of charge with all Quatech PCMCIA and ISA data-acquisition cards. DaqEZ has a menu- and icon-driven interface. No programming is required to perform data acquisition; users simply select parameters, such as sampling rate and channel gains, and begin recording and displaying data. The software supports all Quatech data-acquisition-board functions and is also compatible with Quatech's DaqDrive, which can be used to construct expanded data-acquisition systems. Although Quatech cards also include drivers that interface with many popular third-party software products, in many cases the free DaqEZ package will suffice to meet a customer's needs, the company says.

Quatech, Inc.
622 Wolf Ledges Parkway
Akron, OH 44311
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New Literature

Data Logger Catalog

A product catalog that describes five models of data loggers, their specifications, and the variables they measure can be obtained from ACR Systems. The company's electronic data loggers are self-powered, pocket-sized devices used to measure and record temperature, relative humidity, electric current, pressure, process signals, pulse frequency, power quality, and other variables. See also (<http://www.acrsystems.com>).

ACR Systems, Inc.
210-12960 84th Avenue
Surrey, BC
Canada V3W-1K7
Circle No. 188 on Reader Service Card

Carrying-Case Catalog

ZERO Enclosures, which makes deep-drawn aluminum enclosures and cases for the telecommunications, instruments, and data-processing markets, has announced a 32-page catalog of carrying and transport cases for sensitive equipment. Over 40 standard cases are available for next-day shipping, including the company's Valuline and Centurion Elite series. The catalog includes watertight and shielded cases, and a case-selection guide that assists the choice of the correct case.



Zero Enclosures
500 West 200 North
North Salt Lake, UT 84054
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The descriptions of new products listed in this section are based on information supplied by the manufacturers, and in some cases by independent sources. *The Industrial Physicist* can assume no responsibility for their accuracy. To facilitate inquiries, a Reader Service Card is attached between pages 38 and 39.