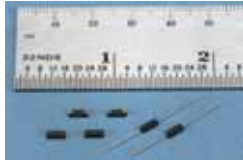


# Product showcase

## Proximity sensors

The PRX+2450 series of surface-mount proximity sensors from **Hermetic Switch** delivers the advantages of reed switch sensing technology in a small footprint. The series is based on the firm's HSR-0025 reed switch, which is said to be the smallest and most magnetically sensitive reed switch in the world. It is more than 50% smaller than the smallest reed switch previously on the market. The unit combines both switching and sensing functions, requiring no electric power to operate.

*For more information, circle 101*



## Differential receiver

**Pulse Research Lab's** PRL-425 Series universal differential receivers and line drivers can receive any differential signal with a minimum amplitude of 100 mV and a common-mode range between -2.4 to +4 V. The differential TTL and RS-422 outputs can run up to 300 MHz, and the NECL outputs up to 1.8 GHz. The ready-to-use devices can translate and/or buffer signals from satellite receivers, optical transceivers, military equipment, and telecommunications equipment. They come with Triax I/O connectors or differential SMA inputs and floating 100  $\Omega$  differential input impedance, suitable for receiving differential LVDS, LVPECL, LVTTTL/CMOS, NECL, PECL, LVPECL, RS-422, or TTL signals.

*For more information, circle 102*



## Nitrogen gas springs

**Hyson Products'** CS2 Series controllable nitrogen gas springs are engineered to control the return of the pad to achieve part quality, and to simplify and improve part transfer. Fitted with a normally open cartridge valve that simplifies the control system, the CS2 gas spring combines the charge and bleed ports. This new gas spring design requires only 4-bar air pressure—an improvement over the low pressure version of the original CS model.

*For more information, circle 103*



## 3-D collaboration

**Adobe Systems** has introduced Adobe Acrobat 3D to extend document-based 3-D design collaboration capabilities to virtually anyone. Using Acrobat 3D with Adobe Reader, engineers can convert 3-D models from a wide variety of CAD formats and embed them into PDF files. Users can enhance 3-D objects in PDF documents by editing



lighting, adding textures and materials, and creating animations such as assembly and disassembly instructions. When enabled by Acrobat 3D, Adobe Reader users can view product structure, add comments, and use measurement and cross-section tools directly on 3-D objects in PDF files.

*For more information, circle 104*

## ac current transducer

The 1070 Series ac true RMS current transducers from **American Aerospace Controls** provide an accuracy of 0.25% over a temperature range of -40 to +85°C and frequency range of 20 Hz to 2 kHz. The units enable accurate and simple comparisons of ac current measurements as well as of dynamic signals. They provide a current signal from 4 to 20 mA dc and a voltage power range from 12 to 32 V. The transducers come in 14 current ranges from 2 to 250 A. They feature protection against reverse polarity and overload currents of up to 500 A, as well as a load resistance range from 0 to 300  $\Omega$ .

*For more information, circle 105*



## Optical testing

The QED Sub-aperture Stitching Interferometer from **Janos Technology** increases the firm's range of optical fabrication and testing services by increasing interferometric capabilities and providing radius of curvature and surface figure measurements for both high numerical aperture (NA) and large aperture optics. The workstation features a 5-axis CNC machine base integrated with a Zygo VeriFire AT phase-shifting interferometer capable of measuring lenses up to 280 mm diameter and NA of 1. The unit automatically acquires and stitches sub-aperture data, and calculates and compensates for reference wave-front errors, thus achieving better than  $\lambda/100$  P-V accuracies (at 632.8 nm).

*For more information, circle 106*



## Design analysis

A completely redesigned version of COSMOSDesignSTAR has been released by **Structural Research and Analysis Corporation**. In addition to a new graphical user interface, the software offers several new tutorial features and a variety of new analysis capabilities that include virtual connectors for assemblies, drop tests, and fatigue life. Despite these changes, COSMOSDesignSTAR 2006 is fully compatible with COSMOSDesignSTAR 4.5. The virtual connectors are new, knowledge-based tools that make it easy for analysis users to perform complex assembly analyses without difficult and time-consuming connector modeling.

*For more information, circle 107*



## Motorized force tester

The Motorized Force Tester Model ESMH from **Mark-10** is a 50-lb-capacity horizontal test stand designed for tension, compression, and friction testing. A smooth top surface makes the unit suited for coefficient of friction testing. Other applications include the testing of sealed pouches, fabrics, and tubing. Integrated limit switches enable repetitive testing. A modular design allows for a wide range of testing setups, while a metal enclosure helps prevent internal damage from spillage or dust. A remote control unit distances the operator from the test for added safety.



For more information, circle 108

## Rugged I/O

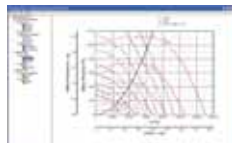
The rugged C437, low-power 6U VMEbus board from **Aitech Defense Systems** provides multiple I/O capabilities including analog-to-digital, digital-to-analog, audio, and discrettes. Designed for general purpose aerospace applications (such as UAVs and helicopter platforms), the board is well-suited for system integrators requiring I/O for a large number of sensors and actuators. Each of the C437's analog, digital, and discrete I/O sections has independent power and ground domains—fully isolating each signal, maintaining signal integrity, and minimizing cross-coupled noise.



For more information, circle 109

## Graphing/analysis software

**OriginLab** has launched the Origin Viewer, a free downloadable **Microsoft** Windows application. The software enables OriginLab users to share data, graphs, and analysis with colleagues who use other scientific software products. Instrument manufacturers whose software outputs data files can now choose to save data using the Origin "OPJ" format, using the same application support files that come with the Origin Viewer. They then can offer their customers the ability to read and/or write OPJ files that contain their instrument data and associated meta data.



For more information, circle 110

## Distributed computing

The Distributed Computing Toolbox 2 and Distributed Computing Engine 2 from **The MathWorks** enable engineers to develop distributed MATLAB applications and execute them in a cluster of computers. Together the products leverage MATLAB language for algorithm development and accelerate computation via distributed or parallel execution. Features include support of third-party schedulers, inter-process communication capabilities, and communication functions based on message passing interface. The Distributed Toolbox 2 also covers parallel execution of finer-grained applications.



For more information, circle number 111

## Miniature solenoid valve

The new 250 Series solenoid valve from **The Lee Company** claims to set a new standard in the reduction of space, weight, and power consumption. This two-position, three-way miniature piloting solenoid valve features the company's patented MultiSeal technology, which radically simplifies port layout by allowing total porting flexibility 360° around the seal. Offered in normally open and normally closed models, the valve weighs 0.1 lb and power consumption is 7.2 W at 12-V dc.



For more information, circle 112

## Expanded FEA

The latest FEA software release from **ALGOR** features expanded support for 64-bit **Microsoft** Windows and 32- and 64-bit **Red Hat** Linux operating systems for all analysis types. Previous releases have supported 64-bit Windows for linear static stress analysis, and now V19 expands multiplatform support to all ALGOR analysis types including Mechanical Event Simulation with linear and nonlinear material models, linear dynamics, steady-state and transient heat transfer, steady and unsteady fluid flow, electrostatics, and full multiphysics. V19 also features boundary layer meshing for accurately simulating flow around a fluid boundary and new results evaluation capabilities.



For more information, circle 113

## CFD add-on

The newest release of STAR-CAD Gateways, V4.02, from **CD-adapco**, provides access to the full capabilities of STAR-CD V3.26 and STAR-CCM+ V1.08 directly within the CAD environment. Because the CFD model is fully associated with the CAD geometry, any design changes made in response to simulation results or other factors are automatically reflected in the CFD model, and subsequently the solution. Solution times are decreased with the implementation of faster mesh generation and increased solver speed, and critical engineering data is now automatically presented in a fully automatic HTML report.



For more information, circle 114

## Suite solution

**ATA Engineering** and **Vibrant Technology** have jointly announced the launch of VibraSuite, a new package that combines four separate mechanical test and analysis tools.

VibraSuite uses a token-based software license server to give engineers access to a range of software products from different vendors, incorporating ME'scope software from Vibrant with three related applications from ATA: Rotate, Attune, and IMAT. All VibraSuite component applications are integrated by common file formats. For example, any frequency, order, or time-based vibration data extracted by Rotate can be displayed in ME'scope as an animated operating deflection shape.



For more information, circle 115