

USB-based analyzer

SPI Xpress is a high-speed SPI (serial peripheral interface) exerciser/analyzer for debug, analysis, programming, and testing of chips and electronic boards from **Saelig**. The tool works on various



serial interfaces, including three-wire with bidirectional data line, all at up to 50 Mbit/s data rate for cycle-accurate operation and zero latency between accesses. 8PI control panel software features an SPI application with graphical user interface, integrated waveform viewer, scripting TCL/tk interface, and direct C/C++ DLL access to enable automated control and integration within custom environments. Powered either from a USB bus or from an external power supply, the versatile SPI Xpress three- and four-wire analyzer uses a 2.0 USB high-speed interface to analyze for chip-to-chip communications. Suitable applications include both in-lab development and on-site servicing.

Microwave spectrum analyzer

The R&S FSL18 from **Rohde & Schwarz** features a frequency range of 9 kHz to 18 GHz and can perform measurements on microwave systems including radar and microwave link systems, as well as production tests on microwave components such as mixers and amplifiers. Due to its large I/Q demodulation bandwidth and extensive software capabilities, the spectrum analyzer supports the WLAN, WiMAX, and WCDMA standards. Its low mass (<8 kg [181 lb]) and dc/battery operation are suited for mobile use in the field when no ac supply is available. Transmitter measurements for civil and military applications, from WiMAX and Satcom up to radar, can be performed. When equipped with the FSL-K9 option, the unit supports the direct connection of power sensors from the NRP family.

**Advanced leak detection**

The **Uson** Sprint iQ multifunction leak and flow tester is designed to test up to four parts simultaneously, using a range of test methods, high-resolution displays, and communication capabilities. A 24-bit analog-to-digital converter enables accurate measurement of minute pressure and flow changes as low as 0.001 psi (0.00007 bar) and flow ratings as low as 0.01 cm³/min (0.00001 L/min). Sprint iQ is available with dual USB ports, RS232 serial port, and optional ethernet. The unit performs various tests, including pressure decay and leak, sealed component leak, volume verification, vacuum decay, and check valve. The device downloads the rate directly into a database of stored records. Features include easy operation and a high-resolution color graphic interface for clear viewing of pressure and flow curves as well as numeric data.

**Microindentation testing**

The Minuteman ELT Series from **Wilson Instruments** provides semi and fully automatic versions for Knoop, Vickers, and Rockwell hardness testing. It comes in four versions to suit the microindentation and Rockwell scale testing needs. The entry-level ELT1, the intermediate ELT2, and the fully automatic ELT3 are options for the Tukon microindentation testers, while the ELT4 version is for Rockwell and MicroRockwell testers. ELT1 is a video filar system for measuring the indents on the computer's monitor using a virtual joystick. The ELT2 option adds image-analysis capabilities to the software to automatically measure the size of the indent. The ELT3 and ELT4 are fully automatic versions featuring the largest standard motorized stage on the market, according to the company.

**Temperature measurement tool**

The DT9872 from **Data Translation** is the RTD (resistance temperature detector) version of the TEMPoint temperature measurement instrument product line. The instrument, designed for high accuracy and industrial robustness, allows direct RTD measurements with a PC. The device features no warm-up time, according to the company. And temperature values can be viewed, graphed, exported to Excel, and enable limit checking for control or monitoring of a manufacturing process. The unit is designed for precision and productivity with 48 four-wire RTD inputs with Kelvin sensing to eliminate measurement errors. Users can attach platinum 100 ohm, platinum 500 ohm, or platinum 1000 ohm RTDs and mix and match these with voltage inputs for measurement versatility.





Low-profile accelerometer

Dytran Instruments offers the 3211M1 low-profile accelerometer, designed for underwater vibration measurements down to depths with pressures up to 175 psi (12 bar). The 10 mV/g unit features a center bolt mount with 360° cable orientation, titanium housing, and an integral 10-ft (3-m) cable terminating to a BNC plug. The 0.6 x 0.42-in (15 x 11-mm) sensor can be mounted with a #8 or M4 thread screw and offers an operating temperature range of -60 to +250°F (-51 to +121°C) and a 12-V dc output.

Connector enclosure

Cinch Connectors has introduced a breather option for the ModICE Modular Integrated



Connector Enclosure system. Suitable for designs in the off-highway, agricultural, construction, and recreational commercial vehicle markets, the Cinch ModICE line is available with 18, 30, 48, and 60 I/O. The addition of a breather adds design options for thermal or altitude cycling applications. Membrane vents are designed to equalize the pressure differential between the enclosure and ambient, while maintaining IP67 and IP69K seal ratings.

Proportional valve

Sauer-Danfoss has expanded its family of proportional flow control cartridge valves to provide new sizes, including a smaller, more compact design that delivers higher pressure capabilities. The valves work in conjunction



with hydraulic integrated circuits to regulate the fluid flow that controls specific operations on various equipment including forklifts and lawnmowers. The proportional valves are available in eight schemes with normally opened and normally closed options. All valves feature standard IP69K coils, tolerant to voltage extremes, high temperatures, and water ingress. Pressure capability is 260 bar (3770 psi), and maximum flow rates are 120 L/min (32 gal/min).

Touchless rotary sensor

With recent additions of the RFC and Vert-x E series, **Novotechnik's** lines of noncontact and fully touchless rotary position sensors now include six series of rotary position sensors,



suitable for mobile and other harsh environment, limited-space applications. The sensors feature two sensing technologies: non-contact with a rotating shaft found on the RSC-1300, 2200, 2800, and 3700 series, and the company's touchless technology without a shaft, which features a round position marker that mounts separately and away from the detecting sensor component. Sensors are available from 13 to 48 mm (0.5 to 1.9 in) diameter sealed up to IP69K to operate under adverse conditions. Programmable angular range is 360° with resolution to 14 bits; options include analog, incremental, serial peripheral interface, pulse width modulation, and redundant outputs.

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Electronic loads

Transistor Devices' XBL series of electronic loads offers 800-, 2000-, 4000-, and 6000-W models with built-in ethernet, GPIB (general purpose interface bus), and RS232 programming capabilities. With its digital control technology, the series provides increased reliability and performance, making it suited for testing power supplies, batteries, fuel cells, and dc power sources. All models offer master/slave parallel capabilities and closed box calibration. High-power models incorporate variable-speed forced-air cooling to assure a quiet environment. Features include 16-bit digital control; remote control and monitoring via ethernet (TCP), Telnet, and web browser; and fault-tolerant MOSFET modules.



Robotic arms

Epson Robots offers the G-Series high-performance SCARA robots for Micro PowerDrive Controllers. SCARAs offer high-speed performance with high payloads and are part of the 168-model G-Series lineup, ranging from 450 to 1000 mm (18 to 39 in) in reach. The company's smart motion control technology is combined with high-rigidity arm design to achieve improved speed, precision, and low vibration. The robot arms can

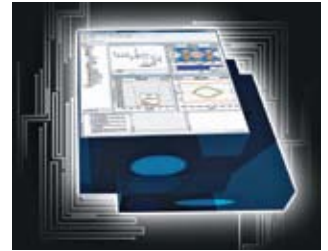
transport either light or 20-100% heavier payloads than previous generations and are available in standard, Class 10 Clean, or IP54/65 configurations in table-top, wall, or ceiling mount arrangements.



Soundproofing barrier

GLT Products offers Vinaflex, a line of noise barrier products designed to meet the physical and performance requirements of acoustical soundproofing applications. A flexible, mass-loaded vinyl barrier engineered for sound isolation, Vinaflex does not shrink, rot, or cause metal corrosion while at the same time resisting environmental conditions, oils, weak acids, and alkalis.

When combined with fibers, foam, or glass, Vinaflex materials form composites that provide transmission loss over a broad frequency range. Blocking unwanted airborne noise, Vinaflex is suitable for pipe soundproofing in various applications including construction, mining, recreational vehicles, marine, off-highway, and agricultural vehicles. Custom sizes are available.



Design software

Ansoft has released new versions of Nexxim high-capacity circuit simulation software and Ansoft Designer (pictured) integrated schematic and design management software. Suitable for de-



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signing digital data links, the electromagnetic modeling products include statistical analysis capabilities to simulate high-speed serial channel behavior, eliminating prototype iterations that require costly test equipment and delay time-to-market, according to the company. Nexxim v4 features VerifEye transient analysis tools to test for low bit error rates; QuickEye fast eye diagram analysis to identify specific bit sequences; and mixed system- and transistor-level simulation. Ansoft Designer v4 features push excitation and links to the company's electromagnetic field simulation tools.



Construction leveling

Leica Geosystems' Leica Sprinter 50 one-button electronic digital level is suitable for daily tasks on construction sites. Users aim, focus on the bar code staff, and measure by single button press. Data, accurate to 2 mm (0.08 in) deviation per 1 km (0.6 mi) double run, is displayed digitally on a large LCD, and built-in tilt sensor prevents the system from measuring outside the compensator range. For more complex leveling tasks, the Sprinter 150/150M and 250M family feature built-in data storage to store up to 1000 downloadable and transferable measurements. And according to the company, the Sprinter 150 automatically determines delta height and other functions.



High-intensity lighting

Superior Signals adds high-intensity LED modules to the Meteorlite product line. The X

Series 6 or 9 high-intensity LEDs and super side-angle optics offer improved brightness and visibility. The weather-resistant modules are epoxy encapsulated for both interior and exterior use and are capable of up to 19 built-in selectable flash patterns, including simultaneous or alternating flashing with amber, blue, clear, and red LEDs. The 6 LED module draws 0.70 A, while Model 9 offers 1.5 A.



External latch

The **Southco R3** push-to-close latch offers improved grip, custom finish options, and key locking security for exterior storage compartments on recreational vehicles, buses, trucks, and truck utility bodies. Rugged die-cast construction meets the cycle-life load performance of other paddle latches. Provided gasket and O-rings keep the inside of storage compartments clean and dry, and the latch is available with an optional inside actuation for emergency exit. Contoured, ergonomic design features provide space beneath the center of the handle for easier grip and comfort during opening. The R3 latch accommodates door panel thicknesses from 0.062 to 2.0 in (1.6 to 51 mm).



Sealess pumps

Rotron brushless dc sealess water circulation pumps can deliver up to 60,000 h of service life onboard heavy-duty transit buses, construction vehicles, and off-highway equipment. Offering leak-proof protection, the sealess design also features the capability

to resist harsh environmental conditions such as hot-water spray, salt, fog, shock, and vibration. The pump magnetically couples to the brushless dc motor without a wet seal to wear or replace. This coupling method also enables easy motor removal without the need for system draining, according to the company. The pumps' electronically commutated brushless dc motor is designed to provide maintenance-free operation over time by eliminating brush maintenance and associated brush motor failure.

Anti-corrosion coating

Low-temp, black chrome plating from **Misumi USA** is available on a variety of the company's motion components, including linear shaft, linear bushings, linear guides, and ball screws. Through electroplating, an alloyed surface is formed to create an anti-corrosion coating (i.e., black film) on



the component. Known as low-temp black chrome plating, this compound is chemically deposited on the product to prevent cracking or peeling, even under the varying conditions of extreme temperatures as well as repeated flexing and friction. Suitable for use in optical applications where low light reflection is required, this low-temp, low-reflective black chrome plating will not peel or flake according to the company.



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