

Mode-Switching Bicycle Fork

Fox Racing Shox, developers of bicycle shocks and forks, introduces the F80X suspension fork. The F80X damper uses the TerraLogic automatic inertia valve mechanism. The TerraLogic inertia valve system uses a brass sleeve called the BrassMass to keep oil from flowing through the compression circuits to provide a lock-out mode when the suspension is not needed and a fully active mode when the terrain is rough. A unique aspect of this technology is the ability to distinguish between compressive forces from the rider and from the terrain, resulting in automatic and efficient mode switching. For more information, contact Fox Factory, Inc., 130 Hangar Way, Watsonville, CA 95076 USA.

phone: +1 831 768 1100

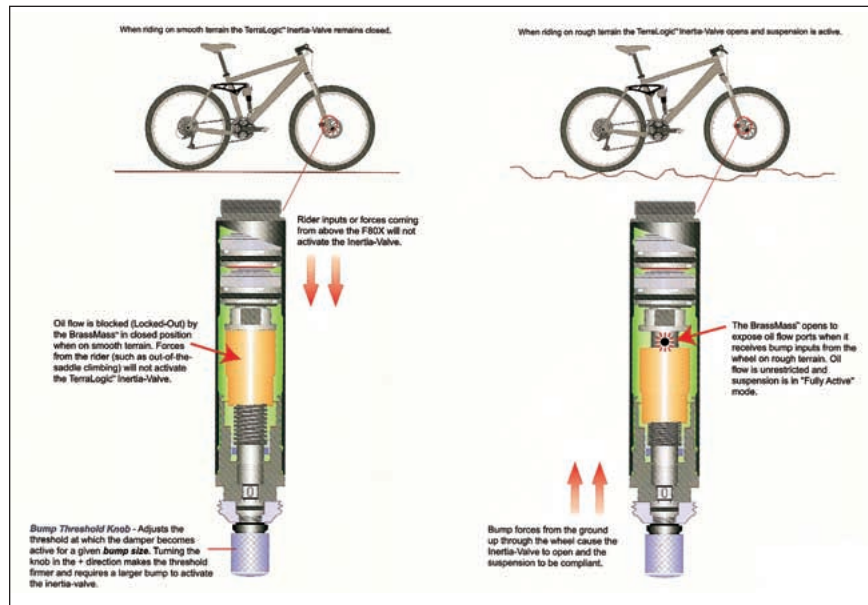
url: <http://www.foxracingshox.com>

Data Collection and Plant Simulation

Visual Solutions announces the release of VisSim/OPC 5.0 software, allowing DCS and PLC systems to talk to VisSim simulation models through OPC (object linking and embedding for process control) servers. The OPC link lets engineers monitor plant data in strip charts or data logs and test for alarm conditions or create a virtual plant in VisSim that is controlled via OPC. This virtual plant can be used for offline loop tuning, controller development, and operator training.

VisSim simulation software allows engineers to use drag-and-drop blocks to construct dynamic process models. The VisSim/OPC client add-on interface then allows engineers to invoke the OPC server, monitor data exchange, and log errors and events. Operators can run a virtual plant including startup-shutdown scenarios as well as destructive tests for failure modes.

VisSim/OPC is Windows-compatible, supports 1.0a and 2.0 data access interfaces, dynamically checks errors, and automatically reestablishes bro-



ken links. The VisSim/OPC client software supports DCS, PLC, and SCADA plant controller systems from companies like Honeywell, Siemens, Foxboro, and Allen Bradley either directly or via third-party OPC servers such as those from Kepware and Matrikon. For further information, contact Visual Solutions, Inc., 487 Gorton Rd., Westford, MA 01886 USA.

phone: +1 800 VISSIM-1

e-mail: sales@vissol.com

http://www.vissim.com/

Control-Design Software

Wolfram Research announces the release of Control System Professional Suite for professionals, researchers, educators, and students using control theory and its applications. The Suite consists of the Control System Professional 2 and Advanced Numerical Methods, which are Mathematica application packages that offer an object-oriented environment for solving control problems that arise in engineering and science.

The core of the suite is Control System Professional 2, whose more than 150 functions allow users to link built-in control objects together to model their own problems. The package is designed to handle both trans-

fer function and state-space objects in discrete- and continuous-time domains. The package allows users to work with the familiar textbook form of control objects or toggle their view to see the underlying Mathematica structures. Mathematica technology provides users with symbolic representation of control objects, systems and equations, and a choice of programming paradigms. The second component of the suite is Advanced Numerical Methods, offering a variety of algorithms for each problem, enabling users to choose the most appropriate tool for a given task.

The Control System Professional Suite is designed for use with Mathematica 4 or later and is available for Windows, Mac, Mac OS X, and most Unix systems. For more information about Control System Professional Suite, contact Wolfram Research.

phone: +1 800 965-3726

e-mail: info@wolfram.com

url: <http://www.wolfram.com/>

Data Acquisition in Adverse Weather

Onset Computer Corporation introduces the HOBO Pro Series, a family of weatherproof data loggers for measuring and recording indoor and outdoor climate data, which can later be



analyzed on a PC. Three models are offered, including single-channel temperature, two-channel temperature, and two-channel temperature with relative humidity. An intrinsically safe version of the two-channel temperature and relative humidity logger is also available for monitoring conditions in hazardous locations where combustible gas or dust may be a concern. Other key features include large memory capacity, weather-proof enclosure, and convenient data offload. For more information contact Onset Computer Corporation, 470 MacArthur Blvd, Bourne, MA 02532 USA.

phone: +1 800 564 4377

e-mail: sales@onsetcomp.com

url: <http://www.onsetcomp.com>

Variable-Resolution Camera and Frame Grabber

Cognex Corporation announces the CDC-200, a member of their digital CMOS-based CDC camera series, which extends the range of vision applications with faster frame rates and global shuttering capabilities. The CDC-200 camera can accommodate mixed-resolution applications using a configurable region-of-interest acquisition feature, allowing users to optimize vision application performance by defining a region of interest anywhere within the field of view. The camera can deliver high-resolu-

tion SXGA images (1280×1024) at up to 26 frames per second (f/s), a standard VGA image (640×480) at frame rates up to 100 f/s, or a 320×240 image at frame rates up to 340 f/s.

The CDC-200 camera is designed for use with the Cognex MVS-8100D frame grabber. The 8100D features a library of vision software tools, including the Cognex PatMax technology for locating objects despite changes in angle, scale, or appearance. The company also offers the MVS-8504 frame grabber, which offers four independent channels supporting up to four cameras. The frame grabber is designed to handle asynchronous, synchronous, and dual-tap image acquisition. The MVS-8504 also provides users with the capability to mix-and-match camera formats, clock rates, partial and full scans, as well as color and monochrome acquisition on a single frame grabber. The MVS-8504 has 16-MB FIFO for reliable image transfer and employs a high-speed 32-b/66-MHz bus architecture compatible with standard PCI 32-b/33 MHz, as well as higher-speed 64-b/66-MHz and PCI-X buses.

For more information contact John Lewis, Cognex Corporation,

One Vision Drive, Natick, MA 01760-2059 USA.

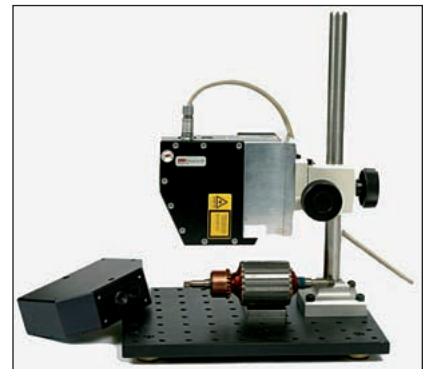
phone: +1 508 650 3000

e-mail: john.lewis@cognex.com

url: <http://www.cognex.com>

High-Speed Laser Sensor

The Long Range Laser Twin Sensor (LTS) from LMI Technologies features a long-range measurement and long standoff distance, as well as up to 200-kHz measurement rate. It tracks object displacements or running profiles at extremely high speeds of up to 200 kHz. The long-range capability of the sensor allows users more maneuverability for fast moving, long-range measurements. Thickness variations as fine as $0.007 \mu\text{m}$ can be resolved when averaged at 100 Hz, with accuracy measured in microns.



Other features of the Class IIIb sensor are its laser spot size of $70 \mu\text{m}$ in diameter, observation angle of 25° , and standoff of 1.18 in (30 mm). The sensor also has the ability to automatically compensate for differences in the object's color and surface; the ability to track pits, surface textures, and sharp increases in object height; and the capability to measure both on frosted and polished surfaces. The twin detectors also compensate for down spikes during changes of the object's color. Typical thickness measurement applications include measuring thin tube material, surface roughness, high-speed motor run out, coplanarity of pins, rubber gear belt profiles, and wire bonding tool check. For



further information, contact LMI Technologies, Inc., 21455 Melrose Ave., Suite 22, Southfield, MI 48075 USA.

phone: +1 248 359 2409

e-mail: issales@lmint.com

url: <http://www.lmint.com>

Touch-Sensitive Switch

Designed specifically for the train, tram, bus, and coach market, the new Series 58 uses capacitive technology in an electronic switching element. It has no moving parts, making it incredibly durable with a significant service life. This touch-sensitive switch is illuminated with two green high-intensity LEDs, which then turn red upon activation. No mounting hole is required. The actuator was designed so that the element can be bonded directly to the mounting surface by adhesives only, thus greatly reducing assembly costs.

The standard color of the Series 58 is gray with other colors available as custom items. The touch area can be laser engraved or screen-printed with a variety of standard legends as well as customs requests when needed.

This type of touch sensitive technology is not limited to transport applications. Applications such as food processing and security/access control are ideal for this type of durable, electronic, antivandal, sealed switch actuator. For more information contact EAO Switch Corporation, 98 Washington Street, Milford, CT 06460 USA.

phone: +1 203 877 4577

e-mail: info@eaoswitch.com

url: www.eaoswitch.com



Ruggedized Handheld Computer

Woodhead Industries, Inc., announces the release of its new MIG™ handheld computing device. Equipped with Microsoft Windows CE.NET, it is well suited to fulfill a broad range of wireless information collection and management needs in real time. Its rugged design can withstand vibration, shock, and water splash. The MIG device is also dust resistant to IP54 providing superior reliability in harsh environments. Enclosed in a rubberized cage design, it has an added safety shock absorber.



The MIG is based on an on-board RISC processor with minimal power consumption. The rechargeable battery pack runs for five hours of continuous usage; with periodic usage the MIG device is operational for a regular eight-hour work shift. Full 6.4" TFT LCD VGA display with a high brightness of 400 NITS provides visibility and clarity for indoor and outdoor environments. The built-in external connectivity allows customization of the MIG device with third-party hardware including mobile GPS, network diagnostics, video, digicam, barcode, and biometrics. Application software can be integrated with the MIG device for factory automation, warehousing, medical and healthcare, security and military. Other solutions available from Woodhead Software & Electronics include PC/PLC interfaces, gateways, I/O simulation software, diagnostic tools, connectors, cable assemblies, and connection blocks. For more information contact Wood-

head Software & Electronics, 50 Northland Road, Waterloo, Ontario, N2V 1N3, Canada.

phone: +1 519 725 5136

e-mail: sales@mysst.com

url: <http://www.mysst.com/>

Computing Node

Thales Computers, a provider of integrated PowerPC™ and Pentium®-based VME COTS computing systems, has introduced the PowerNode3, a single/dual 1-GHz PowerPC G4 high-end computing node. With an ALMA2e VME-PCI bridge that enables 2eSST data transfers at up to 180 MB/s for VME board interconnection, the PowerNode3 features enhanced connectivity. The new PowerNode3 typically draws 30 W for a dual CPU configuration, versus competitive boards that draw up to 60 W (with 7455 1-GHz solutions).

The computing node is designed for state-of-the-art applications requiring real-time data and signal processing, including sonar, radar, medical imaging, and machine vision systems. The node features dual and single Motorola PowerPC G4 7457 processors running at 1 GHz, each equipped with a 2-MB L3 cache and 2-MB private SRAM, linked via a 133-MHz Avignon host bridge. Up to 1-GB onboard SDRAM is accessible at the local bus speed of 133 MHz. The new board also provides twin PCI Mezzanine Card (PMC) slots (one 64-b 66 MHz and one 32-b 33/43 MHz).



Dual gigabit Ethernet interfaces and four asynchronous RS232/422/485 lines provide a range of high-speed networking and connection

options. In addition, three differential 4× high-speed links are routed to the P0 backplane (as per PICMG 2.17), enabling the PowerNode3 CPU board to be interconnected to fabric technologies based on the LVDS standard.

phone: +1 919 231 8000

e-mail: lkirby@thalescomputers.com

url: www.thalescomputers.com

Strain-Gage Signal Conditioner

Highland Technology, Inc., has released their Model V385 eight-channel VME strain-gage signal conditioner. The V385 adds individual remote-sensed excitation supplies to each channel, increasing its precision over the model V380's single excitation supply. New firmware in

the V385 makes it more generally applicable to bridge-type transducer data acquisition.

The Model V380 was designed for weighing applications, but has been used in applications such as airframe testing. It was also designed for generic strain-gage and load-cell applications with higher precision and data acquisition rates. The Model V385 uses separate remotely sensed excitation voltages for each

channel. Users can measure up to eight different sensors with different interface.

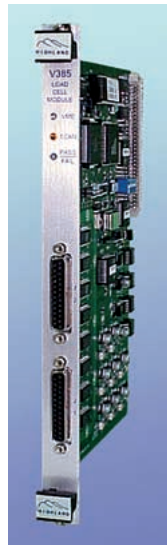
Each differential input channel features a 5- or 10-V switchable excitation source and a 24-b ADC. Input impedance is 60 MΩ, with a maximum input of 50 mV, and a common-mode rejection ratio greater than 100 dB. The standard version of the V385 delivers raw sensor data, while an instrumentation version is available with advanced filtering and normalization functions. For more information, contact Highland Technology, 320 Judah Street, San Francisco, CA 94122 USA.

phone: +1 415 753 5814,

+1 800 473 4418

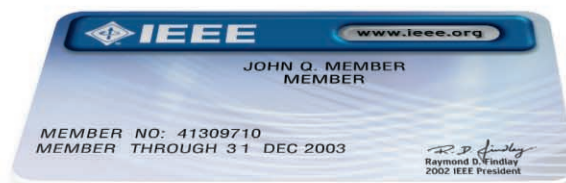
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