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SURVEYOR INTRODUCES THE FIRST LOW-COST 3D STEREO VISION SYSTEM FOR ROBOTICS AND THE WEB

\$550 Dual-Camera Dual-Processor WiFi System Enables 3D for Educators, Researchers and Developers

San Luis Obispo, California, September 22, 2008 - Surveyor Corporation, a leading developer of small vision-enabled wireless robots and robot controllers for research and education, today introduced a first in the industry by offering a \$550 stereo vision system, designated Surveyor SVS™, for robotics, embedded image processing and web-based remote monitoring. With onboard programmability, WiFi connectivity, easy interface to sensors and actuators, open source architecture and a low price, the SVS represents a breakthrough in 3D stereo vision technology cost and usability for researchers, educators and developers.

Stereo vision is similar in concept to biological visual sensing, where the difference in perspective from two cameras, like a pair of eyes, enables computation of object and obstacle location in the vision system's field-of-view. Vision has been an integral part of all Surveyor robotics designs, though camera data has typically been combined information from other sensors such as ultrasonics, infrared or laser to resolve size and distance to perceived objects.

"The Surveyor SVS provides a very effective approach to the challenge of acquiring depth perception without the need for a collection of additional sensors, and the low system cost will bring this technology within reach of more developers," explains Howard Gordon, CEO and founder of Surveyor. "Surveyor has been a pioneer in the development of low-cost vision-enabled robotics, and the Surveyor SVS represents an important building block in connecting machines with the real world."

"The Surveyor SVS is an ideal application for the Analog Devices Blackfin, taking full advantage of the processor's power efficiency, optimized video instructions, high speed video interface, and easy interface to peripheral devices. Surveyor's Blackfin-based products are highly regarded for bringing significant cost/performance breakthroughs to robotics research and education markets, and we see this success continuing with the new stereo vision system." Rob De Robertis, Director of Marketing, Analog Devices (www.analog.com).

"Robotics research continues to mimic natural evolution, and nothing outperforms the eyeball as an environmental sensor. With technology advances, the trend will be to employ vision systems and complex algorithms in robotics systems, and we anticipate that the Surveyor SVS will be another favorite with educators, researchers, and hobbyists alike. Surveyor is providing a great service to the industry by offering high-end technology at prices even a hobbyist can afford. I'm not quite sure how they pull it off, but I'm glad they do." Matt Trossen, founder and CEO of Trossen Robotics (www.trossenrobotics.com).

Product Features

The Surveyor SVS can function as a wireless mobile stereo network camera for Internet video delivery or as an autonomous robotic controller, harnessing considerable onboard vision processing horsepower. The system is comprised of two high- performance Analog Devices Blackfin BF537 32-bit processors (1000MIPS each), two Omnivision OV9655 1.3 megapixel cameras with 90-degree FOV lenses, PWM motor control, servo, GPIO, SPI and I2C interfaces, 3.3V and 5V regulation for battery-based operation, and a Lantronix Matchport 802.11bg WiFi radio, all fitting within in a compact 2.5" x 6" x 2" volume and consuming less than 2 watts. The design is published as open source under the GPL license, with schematics and software available for download from www.surveyor.com/blackfin/

A variety of software interfaces to the Surveyor SVS are provided in Windows, Mac OS/X and Linux. Source code is provided for Java and Python based consoles, and software support for the Surveyor SVS is found in Microsoft Robotics Studio and RoboRealm vision software. Full specifications for the Surveyor SVS and links to third party software are found at www.surveyor.com/stereo/.

Product Availability

The Surveyor SVS is available for immediate order via the company's website.

About Surveyor Corporation

Surveyor Corporation is a leading developer of small vision-based wireless robots and robot controllers for research and education. The company's popular SRV-1 Blackfin Camera and SRV-1 Blackfin Robot are employed by many university research labs and classrooms worldwide for advanced experiments in swarm robotics, autonomous behaviors, sensor development and image processing.

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