



Universal Robotics Launches Spatial Vision and Spatial Vision Robotics

Breakthrough software turns webcams into affordable, highly accurate 3D vision positioning systems that can be easily deployed in any setting

Nashville, Tenn. – [Universal Robotics, Inc.](#), a software engineering company, has announced the launch of two simple-to-use 3D vision software products: [Spatial Vision](#) and Spatial Vision Robotics. The products can turn any pair of webcams into a highly accurate, cost-efficient 3D vision system that can be employed in virtually any setting without expensive equipment.

“Universal developed Spatial Vision to provide accurate, easy-to-use and cost-effective 3D vision systems that can be deployed as a general purpose depth calibration and measurement tool,” said David Peters, CEO of Universal Robotics. “With Spatial Vision and Spatial Vision Robotics, a user can plug in the cameras, calibrate their space and receive highly accurate measurements in under 30 minutes. These products will expand the use of 3D vision to markets where it hasn’t been feasible before.”

3D vision systems offer many benefits over their 2D counterparts, including better accuracy and object identification and tracking, which are essential features in security, engineering and robotics applications from biometrics to real-time control of machines. Despite their benefits, broad adoption of 3D vision systems has been limited in many markets because the systems can be costly to implement and maintain.

Universal’s Spatial Vision products eliminate the need for the precision mounting, specialized cameras, and time-consuming set up that is required for many 3D vision systems. Using two webcams that can be set up and calibrated within a matter of minutes, Spatial Vision and Spatial Vision Robotics can determine the 3D position of any point relative to the cameras with millimeter accuracy.

The Spatial Vision product can be easily deployed in any setting in which cameras can be installed, including laboratories, office buildings, department stores and warehouses, and is an affordable solution for anyone looking for an accurate way to observe and measure an environment. It can be employed in security applications, measuring in-store foot traffic patterns, and more scientific applications requiring object tracking and visual analytics without a wand or sensing device. Spatial Vision offers 30 percent improved accuracy over 2D systems used in object identification and tracking applications, such as facial recognition and other

biometrics. It is optimized for use with popular Logitech 9000 webcams, but can be customized to work with any USB 2.0 camera.

Spatial Vision Robotics has been specially designed to be used in concert with automated machines. By adding LEDs to points of interest on moving machinery, Spatial Vision Robotics provides 3D position on the machine and its surroundings in robot coordinates as seen from the camera. The program enables 3D calibration between the extrinsic object of interest, the robot and the cameras, as well as intrinsic calibration with the cameras. It can work with any robot and is currently optimized for Yaskawa America (Motoman) SDA-series robots. Spatial Vision Robotics can be integrated with path planning and high-speed inverse kinematics to enable real-time control of robots.

Spatial Vision and Spatial Vision Robotics were created as part of the development of Universal's signature technology, Neocortex™, a sensory-motor based form of artificial intelligence that enables moving machines to learn from their experiences and perform tasks that are unsafe or difficult for humans. Neocortex was developed over seven years with NASA and Vanderbilt University, and was funded by U.S. Department of Defense.

For more information about the Spatial Vision product family, go to www.universalrobotics.com/spatialvision.html, or contact Universal Robotics at (615) 366-7245 or info@universalrobotics.com.

About Universal Robotics, Inc.

Universal Robotics creates software that enables machines to learn from their experiences, react and adapt to their surroundings, and perform tasks that are costly, dangerous or difficult for humans to undertake. The company's signature technology, Neocortex, which was developed over seven years at NASA and Vanderbilt University, will increase efficiency and worker safety across industries in applications including warehousing, mining, handling hazardous waste and automating vehicles such as forklifts. www.universalrobotics.com

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