

Roboception Presents High-Resolution 3D Stereo Sensor

The rc_viscore offers 12 Megapixel (MP) resolution for maximum accuracy and level of detail, and is particularly suitable as a sensor component for more complex robotics applications that require a high level of precision coupled with larger workspaces.



Munich, Germany, April 20, 2022. Munich-based technology leader Roboception GmbH expands its range of high-performance sensors for industrial 3D image processing in robotics by adding the rc_viscore high-resolution 3D stereo sensor to its product portfolio.

The rc_viscore delivers an image resolution of 12 MP and hence generates a very detailed point cloud as well as depth, confidence and error images. The impressive image quality allows its use in complex automation applications that require high-quality image processing. It is suitable for the reliable detection of small parts with a size of just a few centimeters, even in large detection areas with a working distance of up to four meters - specifications relevant for automated machine loading, for example.

„We simply wanted to put ‚more pixels in the bin‘ to further increase the applicability of image processing solutions in automation,“ explains Dr. Michael Suppa, co-founder and CEO of Roboception. „We focused on achieving both a high-quality point cloud and a maximum accuracy and level of detail. And, of course, on maintaining the intuitive usability and unique price-performance ratio that our customers appreciate in our products.“

Coupled with Roboception’s rc_cube, the rc_viscore provides the image data for object detection and the computation of grasp points, for example in industrial automation and logistics. The new stereo sensor is compatible with all rc_reason software modules.

The already integrated rc_randomdot pattern projector allows the use even with difficult or low-texture objects and enables exceptionally dense depth images.

The compact and robust design allows reliable use in harsh industrial environments. The innovative 3D stereo sensor is designed for an ambient operating temperature of 0°C to 45°C and operates with convective (passive) cooling. The rc_viscore can be mounted stationary as well as mobile, for example on linear axes, enabling an accurate 3D detection of static objects at different positions within a cell.

For the use of the rc_viscore as a high-resolution RGBD camera, the scope of delivery includes the SGM®Producer, which is a GenICam-com-

patible transport layer. The SGM®Producer can be used with Halcon, with the rc_genicam_api for C++ programmers, with the rc_genicam_driver for ROS and ROS2, and with any other GenICam compatible application.

The rc_viscore is pre-calibrated to the user's individual workspace prior to shipment, and is hence easy to set up. The low-maintenance and IP54-protected 3D stereo sensor was designed for an intuitive use. The implementation is supported by a comprehensive online documentation.

The 3D stereo sensor is available immediately and is already being used successfully in several pilot applications. Roboception will present the rc_viscore live at automatica 2022 (booth



Roboception GmbH

Roboception is a pioneer in the field of 3D sensor technology with innovative hardware and software products: The Munich-based company enables robots to see and thus provides key elements for the forward-looking and flexible automation solutions of Industry 4.0. Roboception's rc_visard stereo sensor and modular rc_reason software suite rely on applied AI, a result-oriented combination of traditional algorithms and machine learning. They give any stationary or mobile robotic system the ability to sense and analyze its environment, as well as plan and execute actions - such as precisely grasping and placing objects in manufacturing, logistics, or laboratory environments. Roboception was founded in 2015 as a spin-off of the German Aerospace Center (DLR) and was awarded the Bavarian Innovation Prize 2018, among other prizes.

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