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| **Press Release** |  **November 7, 2016** |

Live at VISION 2016: Bin Picking system
with Allied Vision cameras makes robots
see and pick objects in a 3D room

The Spanish specialist for artificial vision and Allied Vision’s distribution partner, INFAIMON, has created a solution for Vision Guided Robotics that identifies, selects, picks and transfers defined objects within a bin, using Allied Vision cameras. From November 8 to 10 2016 VISION visitors can experience the Bin Picking system live on Allied Vision’s booth (Hall1, F62).

*Stadtroda, Stuttgart; November 7, 2016*– In robotics and vision systems, picking refers to the combined process of identifying an object using a vision system, the determination of its position in the space and its subsequent picking and transfer to the destination point using a robotized system. Infaimon has developed a solution that does more than identify objects placed on a plane conveyor belt. Their Bin Picking software, “InPicker”, also permits the selection and extraction of parts stacked randomly in a bin.

**Stereovision**

The solution uses Allied Vision’s cameras for recognition and location and a robotics system for extraction and subsequent relocation. The bin picking system is based on stereo vision with two high resolution cameras implemented into the head piece of the robot. Two synchronized images enable the creation of a very precise, three dimensional map of all the objects in order to localize the best candidate for picking with great accuracy.

Two of Allied Vision’s GigE Vision camera models were selected as the two “artificial eyes” delivering the stereo vision image, just as human eyes would do. Depending on the special requirements of the application, either the small and low-cost Mako G-125 or the enhanced Prosilica GT1290 is applied. To ensure the accurate functioning of a robotic system, it is crucial to use the minimum amount of cables, so the robot arm won’t be too restricted. The selected GigE Vision cameras enable a power supply by “Power over Ethernet” allowing both power and data transfer with one single cable.

The Mako G-125 is an ultra-compact (29 x 29 mm) industrial GigE camera with Sony's ICX445 CCD sensor and various mounting options. Mako cameras are so small and light that they can easily be integrated into the robot’s head which further simplifies the usability of the system. For advanced applications requiring perfectly synchronized images at faster read out times, the bin picking system can also be equipped with Allied Vision’s high-performance, 1.2 Megapixel GigE Vision Prosilica GT1290 camera. This camera includes Precision Time Protocol (PTP) which ensures the synchronization of the cameras within 2 microseconds across an Ethernet network.

**Speeding up the processes**Having two cameras working simultaneously has various advantages. Using stereovision, production processes can become faster and more flexible. Objects don’t have to be stacked accurately and consistently, but can be filled randomly into a bin. No time is lost for sorting and aligning them before they are integrated into the products. Even highly complex structured parts can easily be identified. With other technologies, it is difficult to recognize these type of parts in a pile. The use of a stereo head helps to make safe and fast identification possible.

**Pictures:**

* PR3\_AlliedVision\_Bin-Picking-System\_with\_Mako\_Camera
* PR3\_AlliedVision\_Bin-Picking-System\_with\_ProsilicaGT\_Camera

**Profile of Allied Vision**For over 25 years, Allied Vision has been helping people see the bigger picture. Allied Vision supplies camera technology and image capture solutions for industrial inspection, science, medicine, traffic monitoring and many more application areas in digital imaging. With a deep understanding of customers’ needs, Allied Vision finds individual solutions for every application, a practice which has made Allied Vision one of the leading camera manufacturers worldwide in the machine vision market. The company has eight locations in Germany, Canada, the United States, Singapore and China and is represented by a network of sales partners in over 30 countries.
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