



- 1 3D point cloud of a laser scanner.
- 2 2D camera image.
- 3 Handling system with roll-on-gripper.

IMAGE-PROCESSING SYSTEMS FOR ROBOTIZED HANDLING OF OBJECTS

Background

Automated handling processes are often hindered by the fact that the positions of the objects to be handled are not accurately known or are entirely unknown.

Whether the task involves depalletizing cardboard boxes that are arranged in an unknown pattern or unstacking crates that have got out of place or were incorrectly stacked: image-processing systems give robots the ability to »see« and therefore to safely handle objects in such challenging situations.

Technology

Fraunhofer IPA develops state-of-the-art image-processing systems specially suited to applications in challenging handling processes. Depending on the requirements, these systems unite the advantages of 3D sensors and 2D camera systems. The fusion of 3D and 2D information, in com-

ination with the image-processing algorithms developed at IPA, thus makes it possible for objects to be reliably detected and localized.

How you benefit

Greater robustness and enhanced process reliability of your automated handling system for flexible, efficient and dependable in-house materials flows.

What we offer

Fraunhofer IPA will assist you in the following steps:

- investigation of your application with regard to technological, economic and environmental aspects
- design of systems and components
- feasibility studies
- development and implementation of customized automation systems

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