

Compact 3D Sensing fo Precise Gripping Points & Position

3D Robot Guidance enables precise and robust detection of component position and orientation for automated handling processes such as bin picking. A compact 3D stereo sensor reliably captures the position, height, and tilt of objects and provides the robot with exact coordinates for secure and reproducible gripping movements.

This makes it possible to reliably detect and automatically handle components with positional deviations, manufacturing tolerances, or misalignments, even in demanding bin picking applications. In addition to pure gripping point determination, functional surfaces or component conditions can optionally be inspected, for example for quality control or to ensure correct component positioning.



The system is factory pre-calibrated, brand-independent, and particularly easy to integrate into existing automation solutions. This allows companies to efficiently automate previously manual handling processes, increase process reliability, and reduce integration effort at the same time.

The solution is suitable for a wide range of applications such as depalletizing, bin picking, part handling, or automated assembly processes. Thanks to the flexible 3D technology platform, users benefit from a scalable and future-proof foundation for modern, automated production environments.

Customer Quote

„With 3D Robot Guidance, we can reliably grip components even with positional deviations and tilting. The system is compact, quick to integrate, and flexible for a variety of applications.“

Technical Highlights & Benefits

3D Position & Orientation Detection

- Precise capture of X, Y, and Z position as well as the tilt of a component

Tilt Detection

- Reliable detection of misalignments, e.g. in palletized goods or intermediate layers

Factory Pre-Calibrated

- No complex sensor calibration required in the field

Optional Condition Inspection

- Inspection of contact surfaces, component conditions, or damage possible

Robot-Guided Gripping Point Determination

- Exact transfer of coordinates to robot systems from various manufacturers

Compact Sensor System

- Small, high-performance 3D measuring head, also suitable for applications with smaller robots

Simple TCP Calibration

- Quick alignment between the sensor and the robot's tool center point (TCP)

Brand-Independent Integration

- Compatible with robots from a wide range of manufacturers and automation platforms