ABB

PickMaster® External Sensor Solution
Simplifies integration of vision systems

PickMaster application software with Generic Sensor Protocol, adds 3D vision technology to the ABB packaging application. It offers the ability to accurately locate and optionally inspect products of naturally varying size, height and shape such as bread, cookies, vegetables or meat both in the primary and secondary packaging stages.

PickMaster 3
The ABB PickMaster software is the benchmark leader for comprehensive configuration of complex robotics picking and packing systems. The flexible interface and tightly integrated conveyor tracking capability with its 2D vision technology is the proven solution for successful robot integration in high speed picking and packing application.

With the Generic Sensor Protocol, a new field of opportunities are easily accessed for high speed picking and packing applications.

Benefits of using external sensors
By utilizing the external sensor interface customers may integrate any vision system together with ABB PickMaster to provide position data for robotics picking application.

The interface enables anyone to use the simplest 2D-smartcamera, a 3D-solution or a complex deep learning AI system that may be used in a robotics picking application.

Improved picking process with 3D vision
Knowing the true shape of each product, the picking process can be adapted to the actual product dimensions. Therewith the risk of product losses due to tool collisions or too fast robot movements is minimized. In addition, 3D vision can recognize if products are overlapping and eliminate inaccuracies introduced by parallax projection errors known from 2D vision systems over wide conveyor belts.
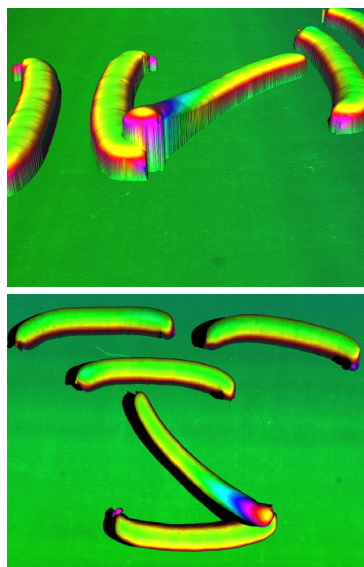
Integrated for PickMaster 3
The Generic Sensor Protocol solution is a simple text-based XML protocol that enables external sensors to provide location data to PickMaster in a one-way UDP socket communication.

A proven example is the SICK 3D Belt Pick SensorApp, which is a ready out of the box solution provided by SICK AG and may be used together with PickMaster 3 to provide three-dimensional position data to any ABB robot.
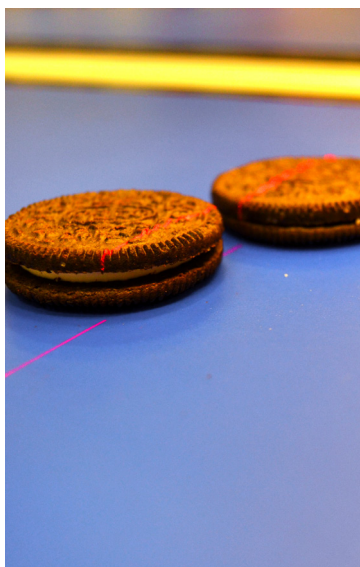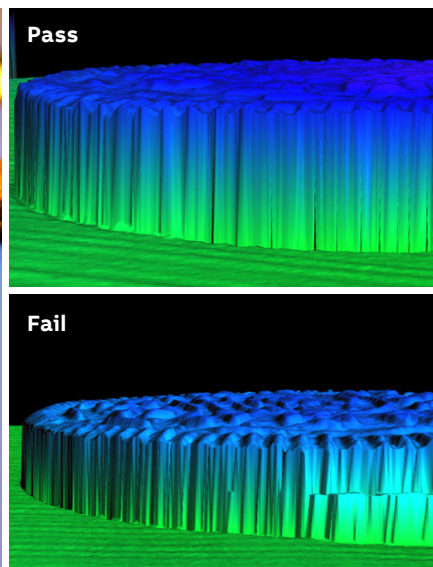
Pass

Fail

01   02   03   04

External Sensor Solution

By utilizing the external sensor interface for PickMaster 3, the customer may use the most appropriate sensor solution required to meet any application need.

The software is ready to listen for object position reported by the sensor on any ethernet port of the PickMaster PC and then distribute the item position information to multiple robot systems according to proven PickMaster features.

Deliverable and options

The External Sensor Solution is a free software package that requires one license unit of option 553-1 External Sensor for every external sensor system supplying item positions to the PickMaster project.

Specification
ABB PickMaster 3
ABB PickMaster 3 Generic Sensor Protocol software solution

PickMaster   **Controller**   **Controller**   **Controller**

Vision Sensor   **Robot**   **Robot**   **Robot**

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