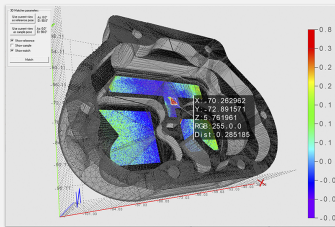


Easy3DMatch

3D alignment and inspection library



At a Glance

- Align a scanned 3D object with another scan or with a reference mesh
- Compute the local distances between 3D scans and a golden sample or reference mesh
- Detect anomalies such as misplaced features, geometric distortions, gaps, bumps,...
- Compatible with all 3D sensors that produce point clouds, depth maps or height maps

Benefits

Easy3DMatch Description

The Easy3DMatch library features alignment functions to find the exact pose (position and orientation) of acquired 3D objects using a reference model. This model can be specified as a reference point cloud or as a 3D mesh from CAD software. Easy3D is required when using any Open eVision's 3D library and is provided when purchasing Easy3DLaserLine, Easy3DObject, Easy3DMatch or the 3D Bundle.

Anomaly detection by the comparison of 3D data against a reference model

After the alignment of the 3D data with the reference model, Easy3DMatch can search for local discrepancies, like holes, bumps, scratches, gaps... The list of detected anomalies is returned along with their individual position, distance and area. New point clouds with distances and colored data can be generated and displayed by the interactive Open eVision 3D viewer.

Support 2D and 3D subdomains of interest

Arbitrary 2D regions (on ZMaps) and 3D volumes (on point clouds) can be used to define subdomains of interest. In this case, the whole object is used during the alignment process, but only some parts are taken into account for comparison and anomaly detection.

Compatibility with 3D sensors

Easy3DMatch can use 3D data coming from a variety of 3D acquisition techniques like laser triangulation, structured light, stereo vision or time of flight. Open eVision's compatibility has been tested with several 3D sensor brands: Automation Technology, Microsoft Azure Kinect, IDS Ensenso, Intel Realsense, Lucid Helios, LMI Gocator, Photoneo PhoXi, Shenzhen SinceVision (SSZN) and others.

3D Viewer

Use the 3D Viewer class of Easy3D to create an interactive 3D display. The 3D Viewer can display point clouds and 3D objects. It uses the OpenGL interface and requires a compatible display device.

Neo Licensing System

- Neo is the new Licensing System of Euresys. It is reliable, state-of-the-art, and is now available to store Open eVision and eGrabber licenses.
- Neo allows you to choose where to activate your licenses, either on a Neo Dongle or in a Neo Software Container. You buy a license, you decide later.
- Neo Dongles offer a sturdy hardware and provide the flexibility to be transferred from a computer to another.
- Neo Software Containers do not need any dedicated hardware, and instead are linked to the computer on which they have been activated.
- Neo ships with its own, dedicated, Neo License Manager, which comes in two flavours: an intuitive, easy to use, Graphical User Interface and a Command Line Interface that allows for easy automation of Neo licensing procedures.

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Applications

Machine Vision for the Electronic Manufacturing Industry

- PCB inspection
- LED inspection
- Connector inspection

Machine Vision for the General Manufacturing Industries

- Checking dimensional accuracy
- Assembly inspection
- Object positioning for pick and place machines

Machine Vision for the Food Inspection Industry

- Food inspection and sorting

Specifications

Ordering Information

Product code - Description	<ul style="list-style-type: none"> • 4184 - Open Easy3DMatch for USB dongle • 4234 - Open Easy3DMatch for PAR dongle • 4284 - Open Easy3DMatch for soft-based licensing • 4334 - Open eVision Easy3DMatch
Optional accessories	<ul style="list-style-type: none"> • 6512 - eVision/Open eVision USB Dongle (empty) • 6513 - eVision/Open eVision Parallel Dongle (empty) • 6514 - Neo USB Dongle (empty)



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