OPTONET, after many years of research and development of technologies in optoelectronic field, develops, produces and sells 3D optical measurement systems whose application fields range from automotive to mould field, from the heritage field to the measurement of human body for application of plastic surgery and beauty treatment.

3D optical measurement systems produced by OPTONET are able to measure an object without contact with its surface: in few seconds are automatically measured million of XYZ points, also with chromatic information RGB, with Z uncertainty from 0.1 mm to 0.02 mm. The several optical heads (OPTO 3D-Ranger®, 3D-SMART and COMBI-3D) are different for weight, dimensions and performances and for the possibility to be calibrated in factory or directly by the customers.

The powerful modeling and inspection software that Optonet sells in bundle with its systems or in stand alone version is PolyWorks™ of InnovMetric Inc., Quebec, Canada, sold as a complete software suite or as two distinct packages, Modeler and Inspector.

By means of Modeler you can align different point clouds in order to complete the global 3D relief of the object, also of big dimension, and subsequently merge these point clouds in only one accurate polygonal mesh that preserves a high degree of resolution.

It is also possible to save directly the 3D model in a STL format (in order to create copies using Rapid Prototyping machines) or in a compatible CAD/CAM format (for modeling applications) and to modify or to correct this tridimensional model.

Modeler is a valid and powerful tool used in order to process small/medium/big quantity of 3D data, in short time. These data can be obtained by different measurement systems, both optical and contact systems.

Inspector is a software solution to compare digitized point clouds to CAD model. It is also used in order to compare subsequently digitizations of the same object, for diagnostic and restoration targets.

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