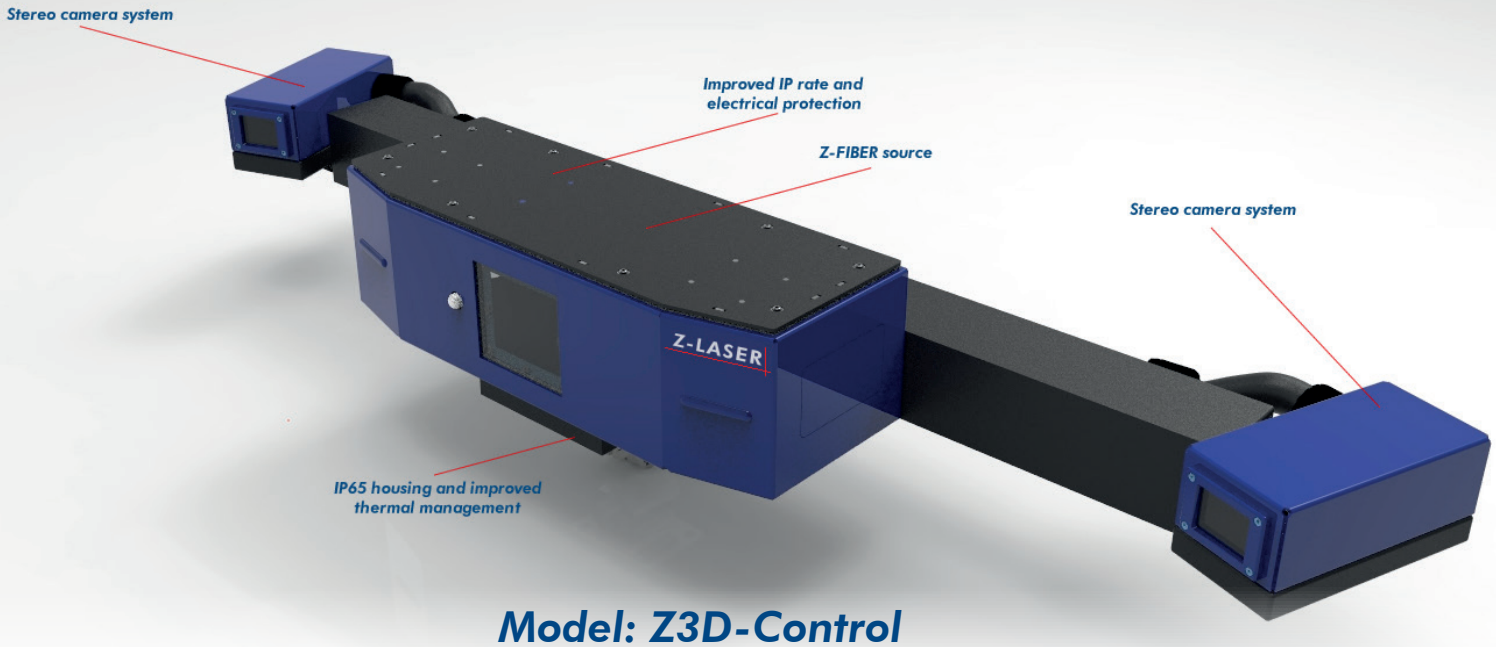
Z-LASER
Intelligent Solutions in Light



Model: Z3D-Control

3D Laser-Projection CAD-data	3D measure-ment and checking	Assembly assistance system	Efficient process (paper-free)	Connecting engineering and production	target-per-formance comparison	Measures zero point offset	IP65 industrial design

Guidance and check

A laser projection system together with a stereo camera and a comprehensive software suite, assist and check manual work flows.

Based on final CAD-Data mounting information's (3D views, 3D projection data, additional information, checking tasks) are derived.

This paper and drawing free workflow links engineering to production.

This features outstanding increases of efficiency and reductions of costs for large and medium size mounting and setup processes.

Highlights

- 3D Laser-Projection of CAD-data
- 3D measurement and checking
- Assist setup and mounting processes
- Efficient process due to fast and simple data preparation (paper-free)
- Links engineering to production (direct effect of changes)
- Robust Set-Actual-Comparison
- Measure zero point shift for further machining
- IP65 – Industrial prove design

Applications

Assemblies for machining and Fixture construction

in

Automotive

Vehicle manufacturing

Aerospace

Metal working

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SYSTEM SPECIFICATIONS

	min. (X) x (Y) x (Z)	typ. (X) x (Y) x (Z)	max. (X) x (Y) x (Z)
Working volume	1,0 m x 1,0 m x 0,5 m 39.4 x 39.4 x 19.7 in	2,0 m x 2,0 m x 1,0 m 78.7 x 78.7 x 39.4 in	5,0 m x 5,0 m x 2,0 m 196.9 x 196.9 x 78.7 in
Working distance	1,5 m / 60 in	2,0 m / 80 in	4,0 m / 155 in
Resolution	0,1 mm / 0.004 in	0,2 mm / 0.008 in	0,5 mm / 0.020 in

SOFTWARE

Software	Rhino 5.0 based
Format	CAD-Data import- and export (STEP. IGES. DXF. STL. ASCII)
Features	- Set up and work through work flows - SDK for implementation in external software

LASER PROJECTION

		640 nm (red)	520 nm (green)	450 nm (blue)
Laser source				
Laser power		7 mW	7 mW	7 mW
Laser class		2M	2M	2M
Field of projection	max.	60° x 60°	60° x 60°	60° x 60°
Accuracy of projection		1mm/m working distance	1mm/m working distance	1mm/m working distance
Projection of vector data		Polygons	Polygons	Polygons

STEREO CAMERA

Resolution	max.	1/10000 Dimension of Measurement area
Camera resolution	Pixel	2448 (X) x 2058 (Y)
Camera field of view		38° (X) x 32° (Y)*

ELECTRICAL SPECIFICATIONS

Input voltage (external power adaptor)		100 - 240 VAC. 50-60Hz
Power consumption	W (RMS/max.)	75 W/190 W
Datainterface		3x Ethernet

TECHNICAL SPECIFICATIONS

Dimensions	(L x B x H)	1308 mm* x 324 mm x 171 mm / 51.50 in x 12.76 in x 6.73 in
Weight	(incl. external power ad.)	19 kg / 41.80 lbs
Protection		IP65

ENVIRONMENTAL SPECIFICATIONS

Environment temperature	with passive cooling: for higher temp.:	+5 °C to +40 °C / 41 °F to +104 °F external cooling system as accessory
Storage temperature		-5° C to +60 °C / 23 °F to +140 °F
Humidity (max.)		<80% relativ. non-condensing

*) Baselength and optics of stereo camera are adjusted to application

CE CE-Conformity according to the directives 2004/108/EC and 73/23/ECC.
Temporary status, subject to technical change, May 2017

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