

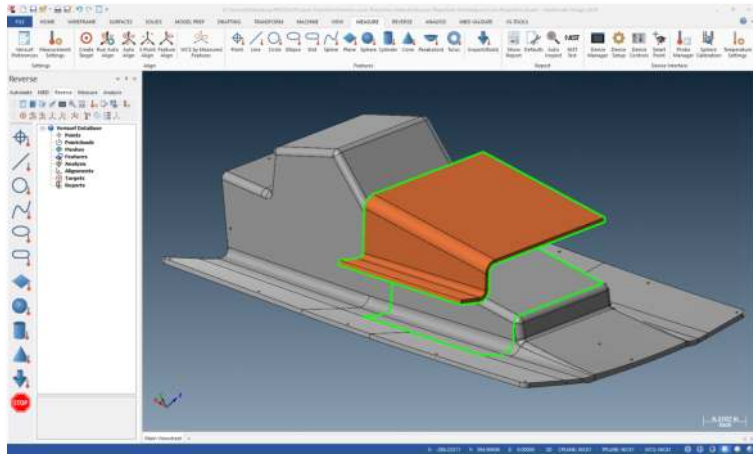
# PROJECT

VERISURF

## 3D LASER PROJECTION FOR GUIDED ASSEMBLY

### VERISURF PROJECT AUTOMATES ASSEMBLY

A powerful, CAD-based laser projector programming application that automates manufacturing assembly and eliminates the need for hard tooling and expensive physical templates



Quickly define, edit, verify and post laser projection programs for composite manufacturing.

Verisurf Project programs laser projectors to accurately project a laser line onto a surface or object using CAD data. An ideal non-contact solution for both composite layup or part positioning, Verisurf Project speeds manufacturing by eliminating traditional setup and taking your manufacturing process directly from nominal CAD to final assembly.

And since your laser projector programs are built directly from CAD geometry, you can be confident that accuracy and repeatability will always be consistent. Verisurf Project imports all

standard CAD file formats. Use lines, splines, arcs, points, surface and solid edges to quickly create projection programs. Verisurf Project is easy to learn and use and works with all major projection hardware brands.

## VERISURF PROJECT FEATURES AND BENEFITS

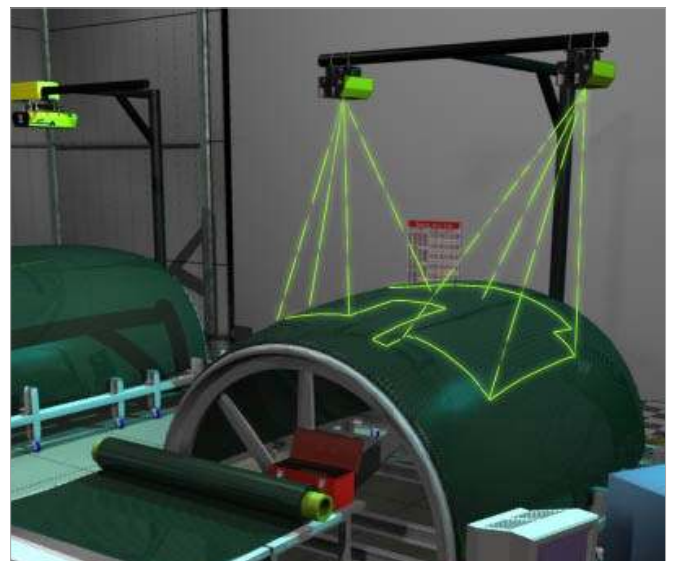
### Features

- Real-time projection during programming
- Supports all industry-standard CAD formats
- Complete, integrated, powerful CAD engine
- Import CATIA\* Composite Ply Data (CPD)
- Read CATIA\* Functional Tolerance & Annotation data
- Inspect\* part or tool to CAD model before assembly

### Benefits

- Guided assembly accelerates manufacturing
- Speeds accurate and repeatable composite layup
- Eliminates need for costly templates and tooling
- Improves overall process control and product quality
- Easy to learn and convert from current mfg. process

\*May require optional software components



Laser projection creates a virtual template - making it easy to locate, orient, and sequence any part.

PROJECT



CAD



MEASURE



BUILD



ANALYSIS



REVERSE



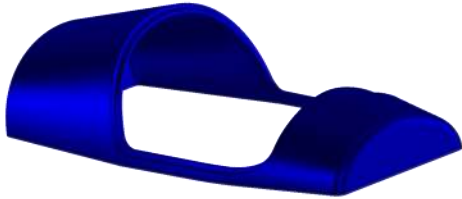
AUTOMATE



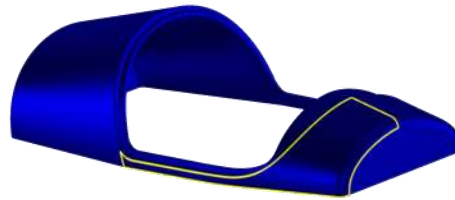


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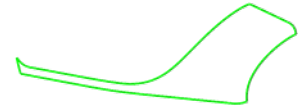
## 3D LASER PROJECTION FOR GUIDED ASSEMBLY



1. Import or create CAD geometry



2. Select lines, splines, and arcs to define laser path



3. Project onto surface or part

### Portable CMM Digitization and Scanning

Updating your manufacturing process to laser projection is easy with Verisurf Project. Use a portable CMM to quickly digitize and replace physical tooling, templates, and masking with virtual, laser projected equivalents. Converting hard tooling and consumable templates to projector paths not only saves time and expense, but eliminates human error as a quality risk factor.

### Laser Guided Measurement

Verisurf laser projection guided measurement leads an operator through repeatable measurement plans by projecting programmed measurement locations in the proper order. Rapid sequential measurement of key characteristics, holes, lengths and profiles are recorded and reported within a pre-defined automated measurement plan that is simple to create and execute. Guided measurement significantly improves inspection productivity by enabling the inspector to focus on measuring without needing to watch the computer monitor and can be performed in conjunction with an appropriately-sized mobile CMM for the specific job. Verisurf's flexibility automates difficult tasks resulting in immediate throughput improvement with minimal training.

## APPLICATIONS

### Composite Industry

- Hand ply lay up
- Advanced Fiber Placement machines
- Mandrel tracking and layup

### Aerospace and Defense

- System bracket placement
- Rib and stringer placement
- Click-bonds and stand offs
- Fastener/drill location
- Paint masking

### Automotive and Heavy Equipment

- Weld stud/block location
- Precision table applications
- Factory floor layout for Production Lines
- Fencing and Robotic Station Layout

### Other Industries

- Shipbuilding and marine construction
- Railway



Laser projector guided profile measurement of a composite layup tool using Verisurf Project and a portable laser tracker.

#### About Verisurf Software:

Verisurf Software has set the standard for model-based inspection, reverse engineering and tool building in aerospace, automotive and a broad spectrum of other industries. Verisurf's field-proven solutions deliver significant improvements in productivity and cost effectiveness. Copyright © 2017, all rights reserved.