

# REVERSE

VERISURF<sup>X</sup>

## POWERFUL CAD/CAM-BASED REVERSE ENGINEERING

Verisurf *Reverse* is a complete Reverse Engineering (RE) solution offering many robust, powerful and innovative tools to create CAD models from measured parts.

**POWERFUL,  
VERSATILE REVERSE  
ENGINEERING  
SOLUTIONS**

### FEATURES & BENEFITS

Using data from virtually any measuring device, Verisurf *Reverse* automatically generates surfaces, features and meshes, as well as cross sections. Digitize a surface patch (NURBS) and trim, blend, offset or extend it. Quickly create multiple tangent surfaces from pointcloud meshes.

Save RE models in numerous CAD formats:

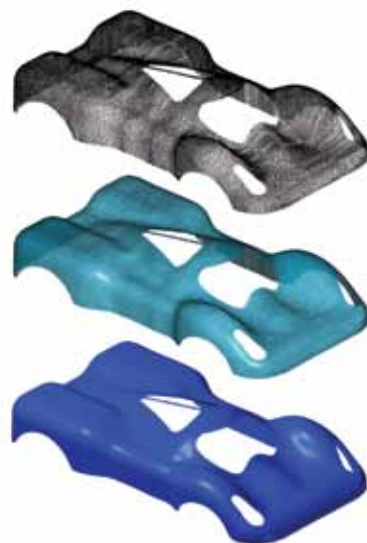
- IGES
- STEP
- ACIS (SAT)
- Parasolid
- STL
- CADKEY
- CATIA V4
- CATIA V5
- AutoCAD

Verisurf *Reverse* provides the tools necessary for a complete scan-to-part workflow. Its single- and multi-patch surface routines provide an ideal solution for simple surfacing tasks. Use *Reverse* AutoSurface for rapid surfacing of complex, intricately shaped parts. For maximum flexibility, use mixed-modeling to blend STL meshes, surfaces, solids and geometric features in a single design.



### Smooth, Accurate Surfaces From Dense or Sparse Data Sets

With Verisurf *Reverse*, engineers can quickly create surfaces from sparse data sets. You can also manage and reverse-design clouds with millions of points into a mesh or surface-model that can be used directly for manufacturing, inspection or tool building.



Verisurf *Reverse* offers today's most advanced and powerful CAD/CAM software tools for processing 3D scan data into usable manufacturing models. It brings state-of-the-art technology to the RE process by utilizing direct measurements of a physical part or artifact to produce an accurate, replica 3D CAD model.

Using data from any 3D measuring device – including high-density scanners – Verisurf *Reverse* creates meshes, surfaces, solids and prismatic features from measurements of physical parts to create precise CAD models.

**REVERSE**

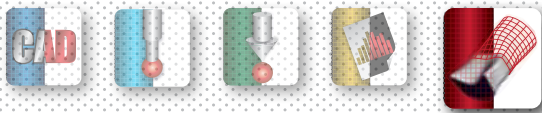
BASIC

MEASURE

BUILD

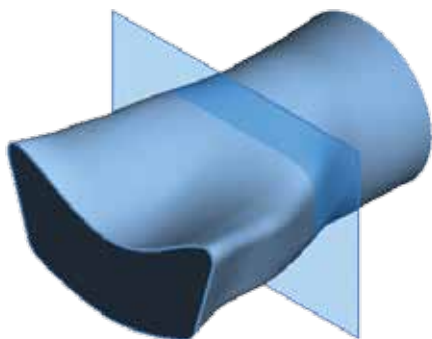
ANALYSIS





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## Re-ENGINEER to CAD

With **Reverse**, users can Best-Fit points to create lines, circles, slots, ellipses, splines, planes, spheres, cylinders, cones, free-form surfaces, and more. **Reverse** also creates meshes from pointclouds in the form of an STL file for surface analysis or tooling and machining.

Used with Verisurf **Measure**, you can enjoy the benefits of an integrated data capture system (including smart recognition of features) in a real-time CAD environment that lets you build the model as you go.

## Save Clouds, Meshes and Features

- Intuitive, tree-based Operation Manager
- Manage points, clouds, meshes and fitted features
- Create smooth, accurate CAD surfaces from either dense or sparse data sets
- Xform – translate, rotate, mirror, scale and dynamically drag
- Filter to reduce large pointclouds by distance, percent, curvature and outliers
- Import/Export STL mesh files
- Mouse sketch curves onto mesh
- Slice meshes
- Project curves on meshes
- Fill holes on meshes
- Add triangles and bridges on meshes
- Extend edges of meshes
- Automatically surface complex shapes
- NIST-tested fitting of geometric features from points



## The Leader in Model-Based Metrology 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. As the common software platform for all type of measuring devices - including stationary CMMs, portable CMM arms, laser trackers and scanners, and many other types of existing and emerging technologies - Verisurf has streamlined the manufacturing process. Our field-proven solutions deliver significant improvements in productivity and cost effectiveness.

