



geomagic®

STUDIO® QUALIFY®

THE LEADING REVERSE ENGINEERING
AND INSPECTION SOFTWARE

ABOUT GEOMAGIC

Geomagic is a leading provider of 3D software for creating digital models of physical objects. The company owns six patents and numerous awards for technologies that accelerate design, reverse engineering and quality inspection of parts and products. Geomagic is based in Research Triangle Park, NC, USA, with subsidiaries in Europe and Asia and partners worldwide.

Geomagic's vision is to advance and apply 3D technology for the benefit of humanity. Geomagic-based technologies impact areas vital to the economy and everyday life: competitiveness, speed to market, quality, greener processes, product personalization, better patient care and gentler, more effective medical treatment. According to Inc. magazine, Geomagic is "leading a modern industrial revolution that will make customization cheap and outsourcing obsolete, and forever change the way things get made – from turbines to artificial hearts."

Applications of Geomagic include ensuring the safe return of the NASA space shuttle; digital processes at Timberland that cut waste by 75 percent; new inspection workflows at Pratt & Whitney, Schneider Electric and Alcoa Howmet that improve quality and dramatically reduce inspection time; and revolutionary treatment of cleft lip and palate at Shriners Hospitals for Children, selected by Desktop Engineering magazine as a "Rapid Technology That Will Change the World."



SIMPLE. INTEGRATED. POWERFUL.

STUDIO[®] WORKFLOW

SCAN AND EDIT

Integrated with major 3D scanning platforms, Geomagic Studio provides powerful point cloud processing tools to help you create polygon meshes.



GENERATE POLYGONS

Interactive polygonal editing tools provide the control and flexibility to sculpt and reshape models early in the 3D modeling process.

CREATE EXACT SURFACES

Exact surface modeling is the preferred method for creating highly accurate 3D replicas of an existing object for analysis, scientific and medical applications.

CREATE PARAMETRIC SURFACES

Create optimized, parametric CAD models, complete with model trees that are editable within Autodesk Inventor, CATIA, Pro/ENGINEER, NX and SolidWorks.

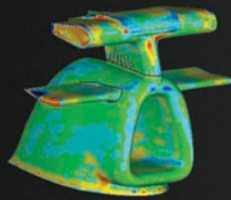
QUALIFY[®] WORKFLOW

INSPECT PARTS IN 4 EASY STEPS:



SCAN AND ALIGN

Integrated with major 3D scanning platforms, Geomagic Qualify enables you to scan or probe test data directly and import CAD models for comparison.



COMPARE

Graphical displays and annotation tools make first-order analysis very simple, while providing accurate results.



EVALUATE

Perform in-depth analysis including industry specific measurements, 2D and 3D dimensions, and GD&T.



REPORT

Output detailed reports with numeric inspection data, multiple views, annotated user-defined views, notes and conclusion, complete with fully interactive 3D models.

DOWNLOAD YOUR FREE TRIAL

Visit www.geomagic.com/products for more information and to download your free trial.

STUDIO®

REVERSE ENGINEERING SOFTWARE

Geomagic Studio transforms 3D scan data and polygon meshes into accurate 3D digital models for reverse engineering, product design, rapid prototyping and analysis. The fastest way to convert 3D scan data into parametric models, Geomagic Studio is the first reverse engineering software that directly integrates with all leading mechanical CAD packages. Geomagic Studio offers parametric modeling capabilities as well as features for capturing exact geometry, giving you the power and flexibility to choose the modeling method that works best for your application.

CLOSE THE LOOP BETWEEN THE DIGITAL AND PHYSICAL WORLD

Changes are a natural part of the design process as concepts are refined and prepared for manufacturing. Changes also occur once a part is put into use due to wear and tear, customization or adaptation. Geomagic Studio enables you to close the loop and align the physical and digital worlds, ensuring that you have a digital model that accurately represents the current as-built or physical product. There's no need to manually update existing CAD models to compensate for the differences.

LEVERAGE THE PHYSICAL OBJECTS YOU ALREADY HAVE

With Geomagic Studio, you can jump start your design process by seamlessly bringing physical forms into the digital realm – leaving more time to explore and refine concepts. Whether starting with a clay model, incorporating organic elements or reusing components from an existing physical part, you can easily leverage these important assets and turn them into digital models with Geomagic Studio.

PRODUCE EITHER EXACT GEOMETRY OR DESIGN INTENT

Whether you want to create exact 3D replicas of an existing object for medical or engineering analysis applications or model them as they were originally designed, with a combination of primitive shapes, swept features and freeform surfaces, Geomagic Studio gives you the freedom to choose the modeling method that works best for your project.

CREATE PARAMETRIC MODELS FROM 3D SCAN DATA

Geomagic Studio is the first reverse engineering software to directly integrate with five leading mechanical CAD packages. Parametric Exchange in Geomagic Studio allows you to quickly and easily create parametric CAD models, complete with model trees that are editable within Autodesk Inventor, CATIA, Pro/ENGINEER, Siemens NX and SolidWorks. By transferring parametric surfaces, solids, datums and curves from Geomagic Studio directly to CAD, you'll save valuable product development time.

ACCESS THE BEST TOOLS FOR YOUR PROJECT

Geomagic Studio provides the most intuitive yet powerful reverse engineering tools at your finger tips. Its powerful one-button commands make it fast and simple to go from point cloud to accurate surfaces. With a single click, the Mesh Doctor command automatically detects and corrects errors in the polygon mesh in seconds. After that, use the powerful one-button AutoSurface command to produce high quality surfaces. Geomagic Studio's intuitive yet powerful parametric modeling workflow provides flexibility to iterate on design decisions.

DELIVER RESULTS IMMEDIATELY

Geomagic Studio is known for its simplicity and ease of use. From easily accessible resources and shortcuts that are all available at one spot, to a new, clean and organized interface that you can customize, as well as, tooltips in the language of your application, Geomagic Studio is designed to help you deliver results from day one.

QUALIFY[®]

INSPECTION SOFTWARE

Geomagic Qualify enables fast, accurate, graphical comparisons between digital reference models and as-built parts for first-article inspection, production inspection and supplier quality management. Delivering best-in-class reporting capabilities, Geomagic Qualify's powerful yet simple report designer allows you to design and customize inspection reports to meet the requirements of your organization. Geomagic Qualify is also the first inspection software that allows you to share your results with fully interactive 3D models that can be viewed by Adobe Reader.

CAPTURE A COMPREHENSIVE SET OF DATA FOR COMPARISON

Why settle for two dimensional measurements with a traditional CMM or inspection gauge when you can capture every detail of your as-built part? Measuring and comparing the entire part enables you to accurately pinpoint trouble spots. For multi-sensor metrology users who want to combine 3D scanning with hard probing, Geomagic Qualify's powerful hard probing capabilities lets you capture full 3D scan data and then use the hard probe to quickly identify features, measure specific areas or evaluate GD&T callouts.

INSPECT PRODUCTS IN A FRACTION OF THE TIME

With Geomagic Qualify, inspection and approval can be completed in hours instead of weeks – accelerating time to market, significantly reducing cost and giving you a measurable competitive advantage. Use the Automation Designer to quickly adapt existing inspection plans as inspection processes evolve and requirements change. Just drag and drop to add, remove or edit analysis.

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PERFORM IN-DEPTH PRODUCT AND PROCESS ASSESSMENT

Take advantage of Geomagic Qualify's sophisticated analysis features to quickly assess out-of-tolerance conditions.

3D Compare creates a full color deviation map comparing the reference to the as-built part – aiding the designer's understanding of problems and enabling quicker turnaround time for design changes. Additional tools enable measurement of wall thickness, edge comparison, GD&T tolerances, as well as 2D and 3D dimensions.

COLLABORATE ON THE INSPECTION PROCESS

Geomagic Qualify outputs detailed reports with numeric inspection data, multiple views, annotated user-defined views, notes and conclusions. Its powerful report designer makes even the most complex customization needs easy. Geomagic Qualify is the first inspection software that allows you to embed 3D models with annotation and 3D deviation color mapping directly in a PDF report. Share your inspection results complete with fully interactive 3D models with your colleagues, customers and suppliers. They will be able to rotate the model inside the PDF, zoom to a highlighted area, or select a predefined view using the free Adobe Reader.

MEET STRICT QUALITY STANDARDS

Geomagic Qualify is certified by PTB (Physikalisch-Technische Bundesanstalt) and meets the strict quality standards established by leading automotive and aerospace manufacturers such as General Motors and Pratt & Whitney.

EVALUATE AND INSPECT TURBINE BLADES

The optional Geomagic Blade module for Geomagic Qualify provides specialized features for evaluating, testing and qualifying turbine blades, rotors, stators and components. It enables complete surface and feature inspection for verification to ensure parts meet tolerance, functional and performance specifications.



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