Cx Geomagic® Control X™

Ensure Quality Everywhere

3D SYSTEMS

Cx Geomagic® Control X™

What Is Geomagic Control X?

Geomagic Control X is a professional metrology software that lets you capture and process the data from 3D scanners and other devices to measure, understand, and communicate inspection results to ensure quality everywhere. With Control X, more people in your organization can:

- Measure faster
- Measure more often
- Measure more completely
- Measure anywhere

What Can You Do with Geomagic Control X?

Design for Manufacturability
Use Control X to check prototypes and address manufacturability issues such as deformation after molding or casting.

**Don't Just Find Problems, Fix Them**
Any inspection software can show you where parts are out of spec. Control X integrates tightly with CAD and Geomagic Design X so you can update your 3D CAD models to compensate for any problems.

Assess Damage, Deformation or Wear Accurately and Consistently
Scanning reveals wear or deformation even in unanticipated places. Control X's automated alignment and deviation analysis tools make it easy to locate and measure part wear.

Predict Part Failure Before It Happens
Monitor changes in a part's geometry over time to catch unforeseen problems and take corrective action. Control X includes trend analysis and reporting, so you can predict when a part or tool might fail.

Reduce Quality Control Bottlenecks
Control X is so intuitive, you don't have to be a highly trained or experienced metrologist to use it. Combined with the portability of 3D scanning, more people in the organization can leverage 3D scan-based inspection.
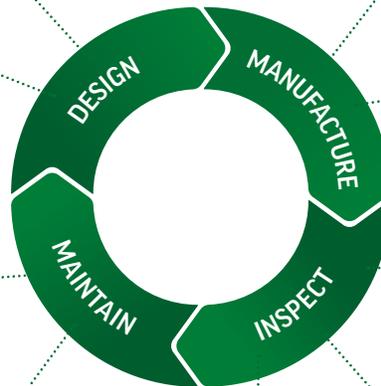
Identify and Resolve Manufacturing and Assembly Issues
Scanning provides a complete view of your parts. Control X gives you the tools and the flexibility to understand how and why a part may have issues and keep production on track.

Eliminate Costly Scrap and Rework
Empower more people to inspect incoming parts from suppliers to prevent defective parts from making it to assembly.

Solve Your Toughest Measurement Problems
Control X has the tools to satisfy demanding quality control requirements, so you can solve your most complex metrology challenges. Go beyond simple alignments and color maps.

Improve Quality Documentation
3D scanning a part creates a complete digital record of all of its geometry. You can perform additional measurements at any time, even when the part is no longer physically present. Discover an issue six months from now? Just pull up the scan and check any dimension – no need to remeasure the part.

DESIGN • MANUFACTURE • INSPECT • MAINTAIN

" Using Geomagic Control X, our testing is 2-3 times faster than in the past, and we can aim for much higher manufacturing efficiency. "

Tetsuya Matsumoto, Quality Assurance Manager at leading automotive supplier Asano, Japan

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Ensure Quality Everywhere

Bring the power of 3D scan-based inspection to more people in more places with software that makes it easy to both capture and interpret scan data.

Gain Deeper Insights Beyond Pass/Fail

3D scanners capture far more information than a hand tool or CMM ever could. Control X lets you leverage that rich data to understand why parts are in or out of tolerance.

Optimize Manufacturing Processes

With insights gained from comparing scanned parts to CAD models or golden parts in Control X, stakeholders can recognize and address issues faster than ever.

7x faster

3D scanning and inspecting parts with Control X is up to 7x faster than with a CMM

80% lower

Control X customers report up to 80% lower inspection costs based on time and labor savings

Why Choose Geomagic Control X ?

Easy to Learn

Don't have time to become an expert in inspection software? Control X is for you. Start getting results with little or no training.

Quick to Use

Control X is flexible – it follows the way you work, not the other way around. And scan-native algorithms built on a CAD kernel make handling huge data sets fast and easy.

Everything You Need

Control X comes with everything you need for professional-level inspection. You don't pay extra for CAD importers, scan mesh processing tools, or airfoil analysis capabilities.

Born to Work with Your 3D Scanner

Get the most out of your 3D scanner with software designed from the ground up to work with it. Control X works with every 3D scanner, so you can add more devices and keep a common software interface to them all.
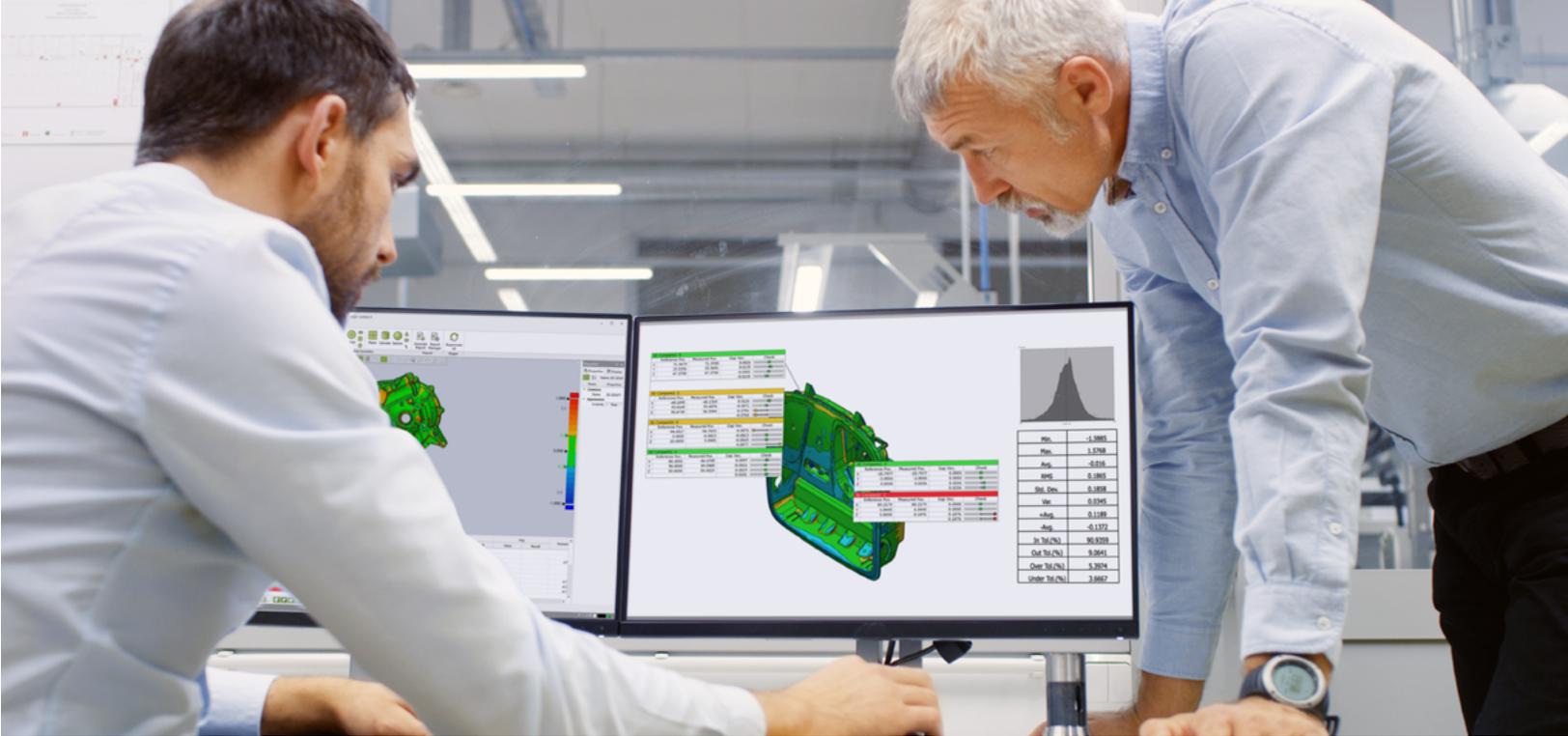
Professional Inspection Capabilities

Use Any 3D Scanner with Confidence

Control X was born to work with data from any 3D scanner. We've built direct interfaces to many of the most popular systems. You're set for the future too –add any 3D scanner at any time, without having to learn another software interface.

Align the Way You Want

Control X has streamlined alignment techniques to cover every inspection scenario:

- Automatic feature-based alignment
- Best fit alignment with constraint options
- RPS, datum, and 3-2-1 alignments
- Adaptive and homing alignments

Inspect Surface Damage or Wear

Control X can automatically interpolate what a scanned object's ideal shape is and measure deviation to quantify even minor surface imperfections.

Compare Scans to CAD

Beautiful, intuitive color maps show you what is in and out of tolerance and by how much. Control X supports myriad comparison techniques, including 3D, 2D cross-section, boundary, curve, silhouette, virtual edge deviation and more. You get native interfaces with PMI for all the major CAD systems too:

Compare Scans to Golden Parts

You can scan a golden part and use it as a nominal model to compare back to. Control X treats the scanned nominal just like a CAD model because it automatically adds feature intelligence to every scan (it knows a plane is a plane, for example).

Iterate and Explore to Understand

You can make changes to any part of the inspection process at any time. Try different alignments, different measurements – anything at all – and Control X will recalculate your entire inspection project and show you updated results in an instant.

Automate the Entire Process

Every aspect of your inspection project is recorded in Control X's model manager. Additional parts can be inspected with a few clicks – or no clicks at all, thanks to the included batch processing app that can run in parallel on multiple PCs.

Measure Dimensions Instantly

Because Control X automatically recognizes features in nominal models (regardless of whether they're CAD models or scans of golden parts), measuring dimensions in 2D or 3D is incredibly quick and easy.

2D and 3D GD&T

With extensive Geometric Dimensioning & Tolerancing tools, you can analyze size, form, orientation, and location of features according to the ASME Y14.5M standard. Control X measures:

- Linear, angular, radial, elliptical, bore depth, counterbore, countersink, and thickness
- Straightness, flatness, circularity, cylindricity, parallelism, perpendicularity, angularity, position, concentricity, symmetry, line profile, surface profile, runout, and total runout
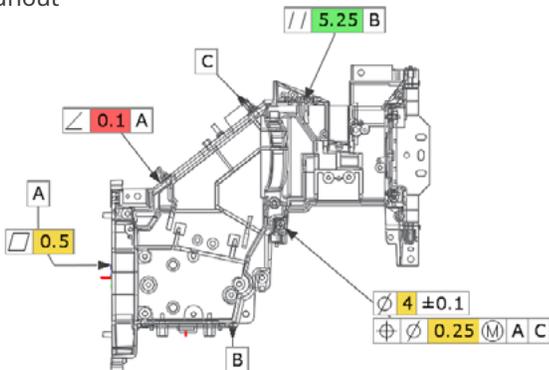
Clear, Interactive 3D Reports for Everyone

Build reports the way you want with templates. And don't worry if you decide to change or add something later – reports update automatically. Monitor changes over time with trend analysis. Share reports with 3D PDF, so everyone can view on their PC, Mac, or phone – no special software required.

Combine 3D Scans with Hard Probing

Get the best of both worlds – non-contact scanning and contact probes – in one integrated software interface. Use LiveInspect™ to perform walk-up inspection or pre-planned inspection with graphical and audio guidance.
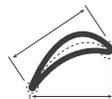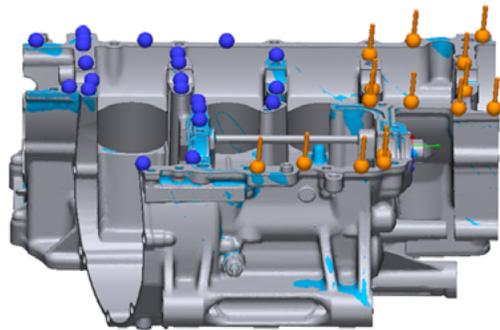
Analyze Airfoils

Control the quality of turbines, blisks, blings or blades with the included airfoil analysis tools. Control X automates the measurement of:

- Airfoil profiles
- Leading and trailing edge position & thickness
- Camber lines
- Chord angles and lengths
- 2D twist analysis
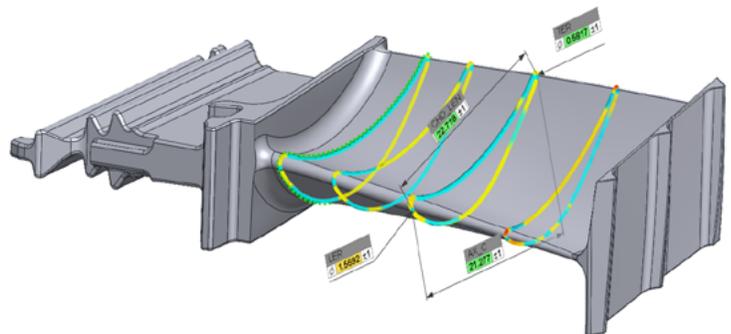
The World's Number One 3D Scanning Software Platform

3D Systems Geomagic unlocks the potential of 3D scanning with advanced technology built to work with the massive data sets produced by today's high-end optical scanners. From scan-based design and reverse engineering to quality control, Geomagic software is an essential component of every 3D scanning system. Control X is modern inspection software that builds on more than 20 years of innovation in making the most out of 3D scan data.

Scan-based Design/Reverse Engineering	Scan Processing	Quality Inspection
Dx Geomagic® Design X™ **Gs** Geomagic® for SOLIDWORKS®	**W** Geomagic Wrap®	**Cx** Geomagic® Control X™

See just how easy it is to ensure quality everywhere with Geomagic Control X. Schedule a demo today.

Call 800. 691. 1839
Visit 3dsystems.com/how-to-buy

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