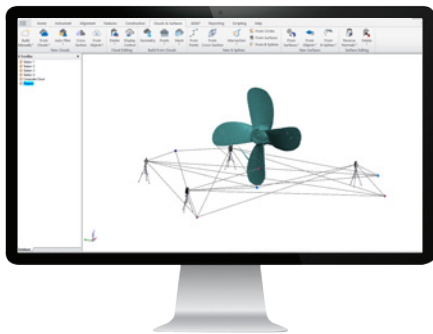**HEXAGON**

SpatialAnalyzer

Powerful, traceable, easy-to-use metrology
and analysis software for large-scale applications

SpatialAnalyzer is the premier portable metrology software solution

SA is an instrument-independent, 3D graphical software that makes it easy to integrate data for performing complex tasks and improving productivity.

SA is the premier portable metrology software solution for large-scale applications. Instrument-independent, this traceable 3D graphical software easily integrates data from multiple instruments and performs complex tasks simply.

SA supports multiple portable metrology instruments, helps with real-time build and virtual assembly, provides traceability of work, enables GD&T inspection, and makes it easy to generate custom reports.
SA addresses ASME and ISO standard GD&T requirements with support for native CAD annotations

With SA, it's easy to inspect parts, build and assemble, analyze data, and automate complex operations to simplify measurement and inspections.

Benefits

- Full support for multiple portable metrology instruments – SA can simultaneously communicate with any number and type of portable metrology instruments

- Align instruments to known coordinate systems using a variety of techniques

- Unique Relationship Fitting enables simultaneous feature-based fitting to organic surfaces in addition to iterative fitting

- Real-Time Build & Virtual Assembly – digital assembly in SA enables users to see how parts will fit in final assembly

- Traceability – maintain a clear history of all data from start to finish with 100 percent confidence from measurement to reporting

- GD&T Inspection – address ASME and ISO standard GD&T requirements with support for native CAD annotations. SA includes exchange and native CAD formats, and supports major file types

- Evaluate & analyze – SA user-friendly interface permits graphical and numerical depiction of measurement uncertainty, enhancing the user's perspective of measurement quality

- Point Clouds – combine laser scanner interfaces with advanced algorithms for feature fitting and automatic target detection

- USMN (unified spatial metrology network) – unique to SpatialAnalyzer, calculate the uncertainty of your network points and instrument positions

Support, Analysis and Reporting

- SA provides support, analysis, and reporting for the toughest 3D metrology challenges

- SA uses a dynamic relationship approach for fit optimization and to minimize rework where parts are out of tolerance

- Advanced reporting capabilities including with direct Excel integration, Q-DAS, and Metrology Reporting

Automation

- SA's Measurement Plan functions can automate inspection processes,

- Calibrate robots with external metrology

- SA SDK available for advanced customization for any measurement application

With SA, it's easy to inspect parts, build and assemble, analyze data, and automate complex operations to simplify measurement and inspections.

GD&T
SA can use CAD-based GD&T / PMI / MBD to create feature checks and automatically report the results to the standard, whether scanning or probing.

Uncertainty analysis
Points based, features based, instrument network based.

USMN – Unified Spatial Metrology Network
SA leverages expected instrument performance to optimize large scale networks to minimize uncertainty and maximize accuracy

Measurement Plan
Internal scripting language to automate measurement and / or analysis and simplify the user experience

SDK (software developer kit)
SA algorithms can run in the background and the operator interacts with a simple GUI

- SA is flexible and can be as easy or as advanced as the user and application requires
- Customers can template their inspection processes for multiple part inspection and standardize reporting
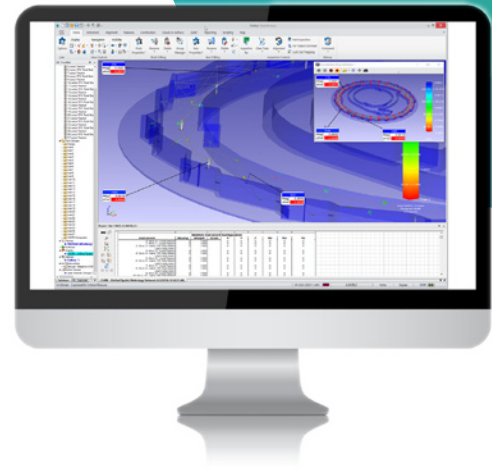
- SA quickly handles large point clouds and scan data with ease.
- Advanced feature extraction and meshing capabilities from scan cloud data

Easy to Use
SA is a highly flexible, instrument-independent, 3D graphical software platform that makes it easy to:
- Inspect parts
- Build
- Analyze data
- Report
- Reverse engineer
- Interface with any type of portable metrology instrument
- Automate complex operations to improve measurement and inspection efficiencies

SA Provides Value
- Addresses simple to complex application uses
- Improve productivity. Save time. Save money.
- Establish ROI and accomplish goals that were previously impossible

Instruments
- Photogrammetry
- Laser trackers
- Arms
- Room scanners
- Total stations & theodolites
- Precision scanners
- Hand scanners
- Laser projectors
- Open instrument architecture to build your own interface