

# Geomagic for SOLIDWORKS versus Geomagic Design X

FEATURE	<b>Gs</b> Geomagic® for SOLIDWORKS®	<b>Dx</b> Geomagic® Design X™
<b>Direct Scanner Tools</b>	Scan directly inside SOLIDWORKS	Scan directly into Geomagic Design X
<b>Scanners Supported</b>	Support of key scanners from FARO, Hexagon, Artec, Creaform, Nikon, 3D Systems Capture	Direct 3D scanner control tools and indirect file import for <b>every</b> major scanner on the market
<b>3D file Import</b>	STL, PLY, OBJ, G3D, .ASC, SCN, VTX, 3PI, .AC, BTX, GPD, PTX	Supports import of over 60 file formats including polygons, point clouds and CAD
<b>Point Cloud Processing</b>	Fast, automated processing	Expertly handles massive mesh and point cloud data alignment, processing and refining, mesh construction
<b>Regioning Tools</b>	Simple automated and semi-automated regioning of the scan data	Expert and comprehensive automated regioning toolkit: edit, combine, split, merge, resegment, enlarge, shrink, manually insert and draw regions, region groups of CAD tessellated & CAE data
<b>Geometry Classification Visibility</b>	N/A	Visualize, classify and decompose a scanned part into basic shapes
<b>Mesh Tools</b>	Standard toolset for automated decimation, smoothing, noise reduction, hole filling	Easy-to-use, comprehensive and intuitive mesh repair tools deliver state-of-the-art in rapid hole filling, smoothing, optimizing, rewrapping, sharpening smoothing and polishing tools. Mesh offsetting, booleans and more plus tools for processing of scan data with no normals.
<b>Alignment Tools</b>	Basic toolset for alignment of scan data, alignment to World Coordinate Systems	Comprehensive, fast and powerful scan alignment, alignment of multiple scans, target-based alignment, alignment to World Coordinate Systems
<b>Surfacing Tools</b>	1-button auto-surfacing of Quad patch output	Comprehensive 1-button autosurfacing with editing of the curve network, intelligent patch network tools, choice of Quad patch fitting and T-junction patches, Boundary-fit and manual surfacing
<b>Parametric Feature Extraction</b>	Extrude, revolve, sweep, Freeform surface, Primitive feature fitting, sketching, cross-sectioning	Extrude, revolve, sweep, Freeform surface, feature fitting, sketching, cross-sectioning, automatic constraint assignment of sketches, Pipe Wizard, Loft Wizard. All features are <b>parametric-based</b> which means that when edits are made the other features are automatically updated for greater productivity
<b>Reference Geometry Tools</b>	Extract plane and vector by selection	Extract plane, vector, point, polyline, coordinate system with multiple combinations of input
<b>3D Comparison with Deviation Analysis</b>	Simple deviation analysis tool compares between mesh object and CAD object at any time	Accuracy Analyzer™ toolset includes: 2D sketch, 2D curvature and Continuity, 3D curvature and continuity, 3D mesh-to-mesh deviation, 3D environment mapping analysis
<b>3D Mesh Sketching</b>	N/A	Automated curve layout toolsets for sketching curves on meshes include lofted slicing plans and extraction of sharp edges
<b>Helix Tool</b>	N/A	Automatic and accurate extraction of helical thread measurements
<b>Color Scan Processing</b>	N/A	Automatically processes color textures on meshes
<b>Batch Processing</b>	N/A	Automated macros for scan processing by node-based definition
<b>Output to Feature-based CAD</b>	Limited to SOLIDWORKS environment	Live Transfer™ supports the output of data to a choice of: Solid Edge®, NX®, Inventor®, Creo/Pro/ENGINEER®, SOLIDWORKS®
<b>3D File Export Options</b>	Limited to SOLIDWORKS environment	Supports comprehensive export of neutral CAD or polygon files
<b>Photorealistic Rendering</b>	Limited to SOLIDWORKS environment	Instantly create stunning renderings of your designs in Keyshot (supplied with Design X)