

SURVEYOR Scan Control

Specifications



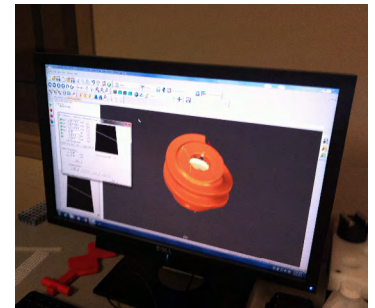
SURVEYOR Scan Control

- Fully Integrated with entire line of Laser Design's Surveyor scanning systems and laser probes
- Easy to learn and use Windows based interface.
- Manage entire 3D scanning process with large point cloud capabilities
- Wizards and scripting for common tasks
- Predefined Scan Parameters for quick selection of scan settings
- Generate Best Path Plan for auto creation of scan paths
- Built-in data filtering and processing
- Direct Plug-In's for 3rd Party Software
- Surveyor EZ for simple production scanning
- Controls up to 9 axes of Motion (3 linear and 6 rotary)



Laser Design's Surveyor Scan Control (SSC) software is the industry's leading 3D scanning software program, both in terms of power and ease of use. SSC is tightly integrated with our full line of laser probes. It also provides motion control capability for our broad range of Surveyor 3D scanning systems and guides the user through the entire 3D scanning process.

SSC's main function is the automated collection of 3D point clouds. It includes advanced point filtering to eliminate problematic data. With the power to easily handle massive point cloud files containing hundreds of millions of points, Surveyor Scan Control is ideal for scanning parts of all sizes. SSC easily manages all automated or manual scanning functions and controls up to 9 axes of CNC servo or stepper motion. Manual joystick scanning or programmed automated scanning is made easy. Surveyor Scan Control was created using the latest Microsoft development tools and has the ability to take advantage of today's most powerful windows based personal computers supporting both multi-threading and 32/64-bit processors.



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With Surveyor Scan Control, alignments and calibrations that once required complicated adjustments are made easy with the help of friendly wizards that guide the operator through the automated process.

SSC's scan files are optimized for use with popular 3D data processing software programs provided by Geomagic, RapidForm, and Innometric while also providing direct software plug-ins. Additional universal formats are available for any 3rd party data processing software. These additional software programs are used to apply surfaces to the point cloud, create STL files, or analyze the collected data for quality control purposes. Analysis programs for both comparison to CAD (color error map) and discrete dimensional measurements are available.

On-screen instructions aid new operators with common tasks. Extensive help menus are also available should the user have any questions. Surveyor Scan Control even features a handy macro function that allows users to "remember" common scan paths that were previously programmed manually. Laser Design's training gets the user on the right track so that they can take full advantage of SSC's power and versatility. A comprehensive SSC training course is available either at our headquarters based in Minneapolis, on-site, or at one of our many international locations throughout the world.

Surveyor Scan Control is powerful 3D scanning software that can be used by CAD experts and novices alike. Whether used with Laser Design's fully integrated scanning systems or with an existing Coordinate Measurement Machine (CMM) upgraded with laser scanning technology, SSC is the only 3D scanning software you'll ever need.

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<p>Motion Control Functions</p> <ul style="list-style-type: none">• CNC Servo or Stepper Control of up to 9 axes (3 linear and up to 6 rotary stages)• Manual / Servo Scanning control – programmable scanning motions• Direct connection to linear scales for Continuous Scanning Motions (Dynamic) or Point to Point (Static) Scanning (up to 5 Dynamic stages)• Manual Continuous Scanning with operator generated movement of the laser over the part by joystick or hand• Supports standard USB windows joystick and Native Motion Control joystick.• Supported Controllers:<ul style="list-style-type: none">- Zeiss: C99L- Wenzel: WPC2030- Pantec: Eagle, WPC2040- Delta Tau: PMAC2, PMAC 2A-PC/104, Turbo PMAC PC/104- Renishaw: UCC2, UCC1, Fusion- Aerotech: Ensemble, Soloist- Newport: ESP (RS232)- Techno Isel: C-Series, IMC4- Tomelleri: Space, Space Plus, Micron, Explorer- Faro: Platinum, Quantum- Romer: Infinite- Delta Tau PMAC2; PC104, PMAC Turbo• Motion Control SDK available for additional user created motion control systems.	<p>User Friendly Interface</p> <ul style="list-style-type: none">• Easy to use Window and fully customizable and scriptable interface• Surveyor-EZ designed specifically for two-click scanning of common scan jobs• Geomagic Enterprise, Innometric Polyworks, RapidForm direct plug-in Integration• Easy to use viewing capabilities including mouse control, Spaceball support, keyboard commands, quick keys and joystick buttons• Customizable keyboard, mouse, and joystick shortcuts for common functions• Predefined Scanning Parameters for easy scanning of multiple surface types• Easy to follow Wizards to guide user through common scanning and setup tasks• Automatic reminders for system calibration
<p>Laser Probe Control Functions</p> <ul style="list-style-type: none">• Support for all Laser Design Laser Probes• Support for 3rd Party lasers• Probe Control SDK available for additional user created laser probes.	<p>User Friendly Data Editing and Processing</p> <ul style="list-style-type: none">• Multiple selection tools available for user preference• Ability to orient scan data to any plane• Allows repeatable fixturing to automatically apply saved orientations matrices• Ability to import and export scan data between different .ssc files
<p>Scan Data Collection Functions</p> <ul style="list-style-type: none">• In-line and Post Scan Data Filtering – to reduce overall data file size without loss of shape definition• User defined Data Quality Filtering• User defined Cross Sectioning of point clouds• Optical Noise Tolerance Filters• Coordinate System definition – 0,0,0 home orientation or user defined position• Scan Setup Wizards to guide user through data collection process• Automated Part Registration using sphere locations allows for parts of all shapes and sizes to be scanned and merged within software	<p>Data Output</p> <ul style="list-style-type: none">• Supported Formats:<ul style="list-style-type: none">- asc, lda, iges, .scn, .pcn, .psl, .mgp, .pcd- Users can also create their own custom data output format using SSC scripting functions• Users can export entire scan file or specific sections• Data sets can be saved in various different units independent of what it was collected at
<p>User Friendly Path Plan Creation and Editing</p> <ul style="list-style-type: none">• Generate Scan paths from data points• Live Scan View allows for easy path plan creation• Drag and Drop path plan adjustment• Spreadsheet viewing and editing also available• Automatic path plan generation for Rotary Scanning• Safe move features minimize crash possibilities• 'Tracking' Feature for objects with extreme height variations• Auto Exposure allows for software to find appropriate probe exposure (brightness) for object surface• Ability to optimize groups of path plans to minimize scan time• Ability to save and reuse path plans• Ability to show current position allowing users to easily fill missed data sets	<p>User Support</p> <ul style="list-style-type: none">• Complete Help File with Context Sensitive Links• Easy to follow Wizards for routine tasks• Pop-up windows warn of possible user errors• Official Software Releases every 3-6 months, beta releases every 1-2 weeks.• Automated Diagnostics Collection• Autorecovery feature for unforeseen difficulties• Undo/Redo functions for all actions• World Wide distributor network• Telephone, email, and On-line Connect support available• Monthly QuickStart training available• On-site training available• Language Localization for English, French, Chinese, Italian, Japanese, and Korean• Fully Scriptable interface