Leica Cyclone REGISTER 6.0
Powerful, Comprehensive Laser Scan Registration and Geo-Referencing Software

For Leica-quality project results with complete statistical reports

Leica Cyclone REGISTER is the industry’s most popular software for registering and geo-referencing laser scan data to a common coordinate system.

Accurate registration and geo-referencing is a must for successful High-Definition Survey™ projects. Cyclone REGISTER is the most rigorous, complete and productive software available for this important process.

Users can take advantage of registration options based on scan targets, scene features, overlapping point clouds, and/or survey data.

Cyclone REGISTER provides detailed statistics reports suitable for inclusion as project deliverables. Reports cover registration accuracy, error statistics and histograms for each target and/or cloud constraint.

Available automation features, friendly wizards and powerful algorithms provide unsurpassed office productivity, even for very large scan data sets.

Features and Benefits

- For use with Leica Geosystems and non-Leica Geosystems scanners
- Auto-match targets or modeled objects
- Easy geo-reference to survey or control data
- Complete in-office management and editing of traverse data
- Cloud-to-cloud registration standalone or with targets
- Wizard-based controls
- Detailed statistics and histograms

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Automatic Target Matching and Registration
Leica Cyclone REGISTER automatically matches targets or modeled objects from different scanning positions to create a system of constraints. These are used to integrate the point cloud data into a single coordinate system. Point clouds can be geo-referenced to survey or known control data, quickly and easily.

Manage Field Collected Traverse Data
For scanners with dual-axis level compensation, users can deploy standard survey traverse methods while scanning in the field. This collection method provides for automated registration. Cyclone REGISTER provides complete, in-office traverse management capability for managing, editing, and cleaning up field collected traverse data.

Powerful, Easy-to-Use Cloud Registration
Cyclone REGISTER’s wizard based controls provide an easy to use method, ensuring the highest level of productivity and highest accuracy in the industry. Unique cloud-to-cloud constraints technology can be used standalone or in conjunction with targets to further optimize the overall registration.

Detailed Registration Diagnostics
Leica Cyclone REGISTER reports the overall accuracy of the registration. Detailed registration statistics include the error for each target constraint and the Root Mean Square (RMS) error and error histogram for each cloud constraint.

Leica Geosystems HDS Software Family
Cyclone REGISTER is part of a full software family for managing laser scan data. Check the web address below for additional information.

### Leica Cyclone REGISTER 6.0 Specifications*

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<th>Constraint management</th>
<th>Cyclone Object Database Technology: fast efficient point cloud mgmt. Create cloud constraints from complete or partial point clouds</th>
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<tr>
<td>Target management and registration</td>
<td>Target based; geo-referenced to survey control data; highly optimized, wizard driven cloud-to-cloud capability. Accurate results via bundle adjustment techniques Extract HDS Spherical, Planar and Black/White targets Automated overlap and target finding wizards Optimized target acquisition and registration workflows</td>
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<td>Diagnostics</td>
<td>Overall accuracy reports Target constraint error reporting Cloud constraint Root Mean Square (RMS) error and error histogram</td>
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<td>Traverse data mgmt.</td>
<td>Office-side traverse content management Add, remove, edit targets, re-run traverse, etc.</td>
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<tr>
<td>Import</td>
<td>Data from CAD via COE (Cyclone Object Exchange) Control data from ASCII formats &amp; X-Function DBX</td>
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<td>Export</td>
<td>Point data in standard formats: XYZ, PFS, PTX, DXF, X-Function DBX, Land XML, etc. Point data in special formats: PTZ, ZFS, TOPO pci &amp; cwf Image and model data: COE, BMP, JPEG, TIFF</td>
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</tbody>
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**Hardware and System Requirements**
- Processor: 2 GHz Pentium® 4 or higher
- RAM: 1 GB (2 GB or more recommended) (2 GB for Windows Vista)
- Hard Disk: 2 GB
- Network card: Ethernet (required for licensing)
- Display: SVGA or OpenGL accelerated graphics card (with latest drivers)
- Operating system: Microsoft Vista** (32 or 64), or Microsoft Windows XP (SP2 or higher) (32 or 64), or Windows 2000 (SP3 or higher with up-to-date patches)
- File System: NTFS

**Some systems may not support Windows Vista’s Desktop Windows Manager (DWM) with Leica Cyclone and must be operated in Windows Classic Look.**

*Reference the Leica Cyclone 6.0 Technical Specifications document for a complete listing of product specifications.

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