Leica Cyclone SURVEY 7.0
Comprehensive Software for Processing Laser Scans in Civil/Survey Applications

For 2D & 3D civil/survey projects
Leica Cyclone SURVEY combines high performance with a rich set of survey-specific tools for analyzing laser scan data and converting the data into deliverables.

Cyclone SURVEY (a lower cost, survey-specific version of Leica Cyclone MODEL) boasts powerful visualization & point cloud navigation plus a complete tool set for High-Definition Surveying™ (HDS™) applications in engineering, construction and asset management.

Cyclone SURVEY provides unmatched office productivity by automating many time-consuming tasks and even letting multiple users work on the same data sets simultaneously – thanks to Leica Cyclone’s Object/Database foundation. Finally, Cyclone SURVEY reflects the data quality & accuracy-consciousness advantages that users worldwide expect from Leica Geosystems.

Features and Benefits
- Multiple, fast, convenient visualization modes
- “Virtual Surveyor” data collector emulation
- Contours
- Cross-sections, profiles
- TIN/Mesh creation, including grid option
- Volumes & areas
- Clearances
- Texture mapping and rectified orthophotos
- Full set of import/export utilities

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Efficient Point Cloud Manipulation & Navigation
Leica Cyclone SURVEY has many features that let users work efficiently with rich laser scan data sets. Cyclone’s Level of Detail (LOD) graphics display and visualization modes allow users to “see through” walls, apply shaded rendering, or enhance edges for improved comprehension of dense point clouds. Texture mapping tools allow users to accurately “drape” photos of the scanned scene onto point clouds for an even more realistic viewing experience. Cyclone SURVEY’s friendly key plan and TruSpace panoramic viewing modes provide intuitive navigation and viewing options.

High-Performance Geometric Processing
Accurately produce a selected geometry type, such as planes and topographic surfaces. Least-squares fitting and quality-of-fit statistics ensure reliable results, while Cyclone’s advanced memory management provides high performance.

Rich Tool Set for Civil/Survey and Other Applications
For excavation and grading, Surface Deviation tools provide accurate quantity calculations. Volume and area for cut and fill are precisely calculated. Output options include volumes, contours, and/or tables including elevation differences at a user-specified grid sample. A Clearance tool even finds and reports absolute minimum vertical and horizontal clearances for overpasses, bridges, interchanges, and overhead sign structures. A Virtual Surveyor tool emulates a data collector for creating topographic maps.

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

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Leica Cyclone SURVEY 7.0 Specifications

<table>
<thead>
<tr>
<th>Feature</th>
<th>Details</th>
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<tbody>
<tr>
<td>Large point cloud mgmt</td>
<td>3D limit boxes, slices, interactive visualization of massive data sets Cycling Object Database Technology: fast efficient point cloud mgmt.</td>
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<tr>
<td>Visualization</td>
<td>Full 3D fly, pan, zoom, rotate. Control color mapping using intensity, true-color, gray scale, color by elevation, one-sided (front or back), silhouette (enhanced edges). Map external photo to point cloud. Key plan and panoramic viewing.</td>
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<td>3D Modeling</td>
<td>Least-squares fitting of 3D geometry. User defined error tolerance. Statistical QA reports</td>
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<td>Animation</td>
<td>Create fly-through animations in 3D point clouds and models</td>
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<td>COE</td>
<td>Seamless two-way data integration with AutoCAD and MicroStation</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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<tr>
<td>Export</td>
<td>Point data in standard formats: XYZ, PTS, 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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Hardware and System Requirements

- Processor: 2 GHz Pentium® 4 or higher
- RAM: 1 GB (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)
- 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 7.0 Technical Specifications document for a complete listing of product specifications.