Leica Cyclone REGISTER
The gold-standard for point cloud registration

Available automation features, friendly wizards and powerful algorithms provide unsurpassed office productivity - even for very large data sets. Auto alignment allows fast and automatic alignment of scans at import or post import. Users can also take advantage of registration options based on scan targets, scene features, overlapping points and/or survey data to speed the registration process.

Cyclone REGISTER is the industry’s best and most reliable solution to register large data sets. Whether you are working with a handful of scans or many thousand, Cyclone REGISTER is equipped to handle the task. Cyclone REGISTER accepts data from all your point cloud and imaging sensors with ease and lets you work with all your data simultaneously.

Cyclone REGISTER brings unparalleled simplicity to complex point cloud registrations. During or even post-import, users can improve their auto-alignment speeds and accuracies via SmartAlign by manually placing scans in their approximate positions or automatically connecting them by time captured or distance between scans. For users who prefer a graphical display of their data during registration, Visual Alignment allows them to position scans based on common geometry via an easily legible high-contrast visualized point cloud.

- when it has to be right
Auto Alignment tool aligns point clouds together and creates and opens a registration automatically for fast and simple registration completion.

Auto Alignment
Automatically creates cloud-to-cloud alignments and automatically creates and opens a registration workflow window.

SmartAlign
Place scan positions on your sitemap (whatever it is, satellite image, hand sketch, etc.) to enhance productivity and accuracy of Auto-Align results.

Visual Alignment
Includes the 2D thumbnail view and the Visual Alignment window.

Target management
Target-based registration; geo-reference data to survey control data; highly optimized wizard-driven capability.

Visual Alignment
Includes the 2D thumbnail view and the Visual Alignment window.

Target management
Extract spherical, planar and black/white targets.

Accurate results via bundle adjustment techniques.

Automated target acquisition and registration workflows.

Constraint management
Cyclone Object Database Technology provides fast, simple, scalable point cloud data management.

Create cloud constraints from complete or partial point clouds.

Traverse management
Office-side traverse management.

Add, remove, edit targets, re-run traverse etc.

Registration Diagnostics
Overall accuracy reports.

Individual target constraint error reporting.

Cloud constraint Root Mean Square (RMS) error and error histogram.

Point cloud data formats: XYZ, PTS, PTX, LAS, E57, ZFS, DP, FLS.

Import
Project data from Leica ScanStations, Pegasus systems and BLK360 imaging scanners. Cyclone REGISTER is compatible with the BLK360 Data Manager as well as BLK360 WiFi import.

Traverse management
Office-side traverse management.

Add, remove, edit targets, re-run traverse etc.

Registration Diagnostics
Overall accuracy reports.

Individual target constraint error reporting.

Cloud constraint Root Mean Square (RMS) error and error histogram.

Point cloud data formats: XYZ, PTS, PTX, LAS, E57, ZFS, DP, FLS, SLW, IXF.

Export
Point cloud data formats: XYZ, PTS, PTX, E57, DXF, PCI/CWF, DBX

Image and model data: COE, BMP, TIFF, JPEG, PNG

Publish directly to a JetStream server, and/or TruView Enterprise and TruView Cloud.

SYSTEM REQUIREMENTS

Operating system
Windows® 7 (32 or 64 bit), Windows® 8.1 (64 bit only), Windows® 10 (64 bit only)

HARDWARE

Processor
2 GHz Dual Core processor or better
3.0 GHz Quad Core w/ Hyper-threading or higher

RAM
2 GB (4 GB for Windows 7)
32 GB’s or more 64 bit OS

Hard disk
40 GB
500 GB SSD Drive

Display
SVGA or OpenGL accelerated graphics card (with latest drivers)
Nvidia GeForce GTX 680, Quadro K4000 or ATI Radeon 7850 or better, with 2 GB’s memory or more

File system
NTFS

Note
Ensure that minimum requirements for both publishing and viewing are observed for best results.

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*See Leica Cyclone REGISTER 360 data sheet and flyer for more information on the product and interoperability with Cyclone REGISTER.


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