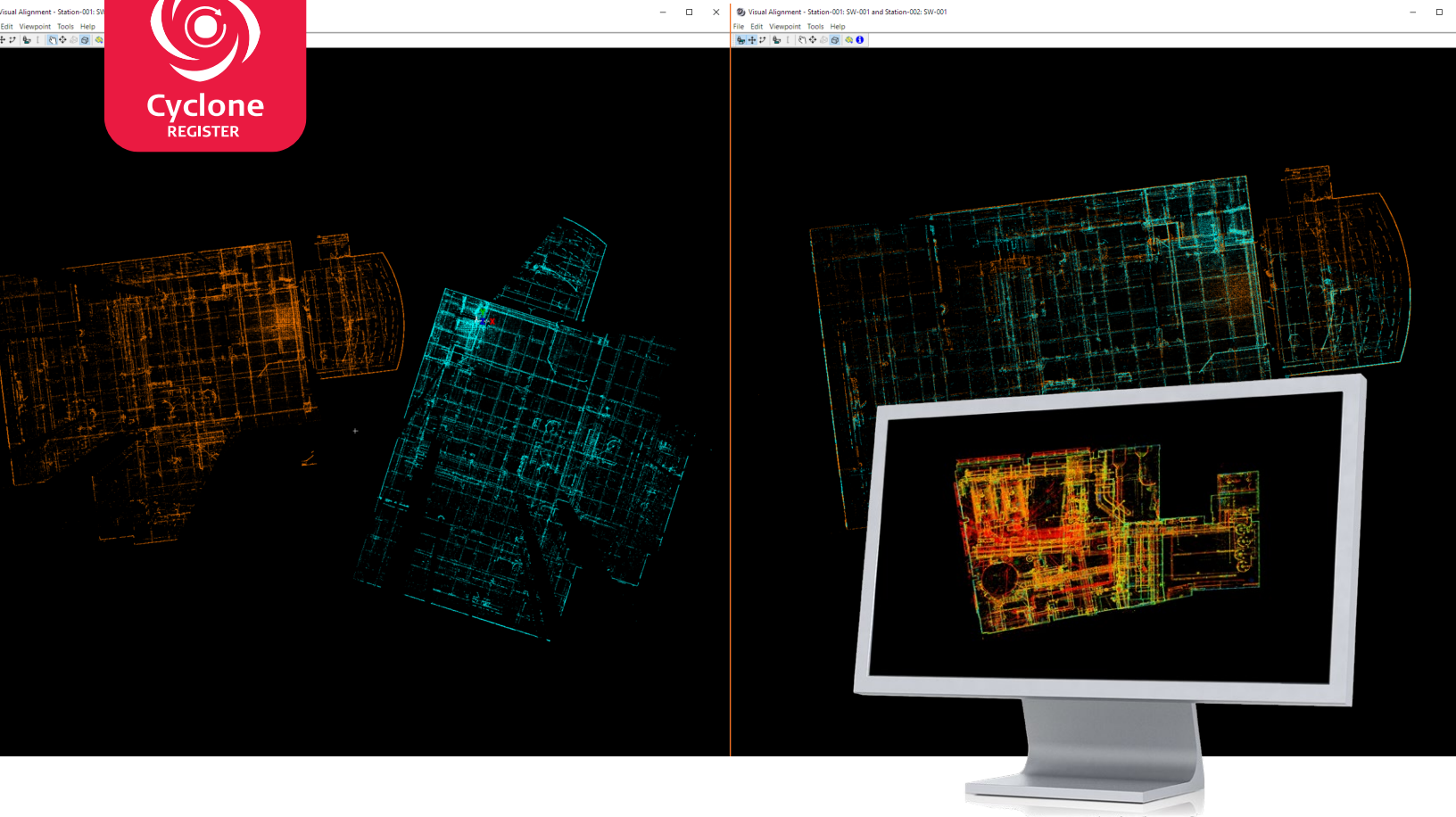


# Leica Cyclone REGISTER

## The gold-standard for point cloud registration



### Speed

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.



### Scale

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.



### Simplicity

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.

[leica-geosystems.com](http://leica-geosystems.com)

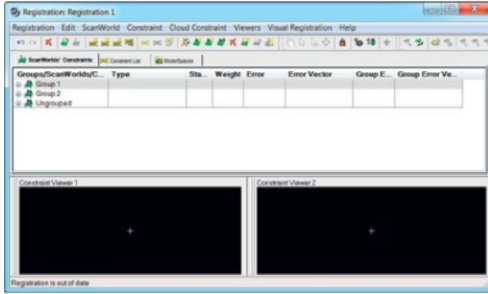


- when it has to be **right**

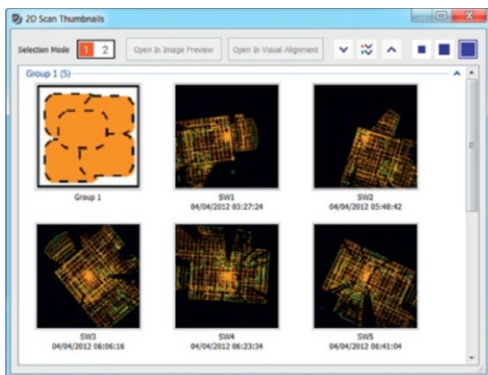
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# Leica Cyclone REGISTER



Auto Alignment tool aligns point clouds together and creates and opens a registration workflow for fast and simple registration completion.



A scan thumbnail window provides the user with a clear view of all scans within a project. Scans can be viewed and aligned visually right after import.

<b>Auto Alignment</b>	Automatically creates cloud-to-cloud alignments and automatically creates and opens a registration workflow window.
<b>SmartAlign</b>	Place scan positions on your sitemap (whatever it is, satellite image, hand sketch, etc.) to enhance productivity and accuracy of Auto-Align results.
<b>Visual Alignment</b>	Includes the 2D thumbnail view and the Visual Alignment window.
<b>Target management</b>	Target-based registration; geo-reference data to survey control data; highly optimized wizard-driven capability.
	Accurate results via bundle adjustment techniques.
	Extract spherical, planar and black/white targets.
<b>Constraint management</b>	Automatic overlap and target finding wizards.
	Optimized target acquisition and registration workflows.
	Cyclone Object Database Technology provides fast, simple, scalable point cloud data management.
<b>Traverse management</b>	Create cloud constraints from complete or partial point clouds.
	Office-side traverse management.
	Add, remove, edit targets, re-run traverse etc.
<b>Registration Diagnostics</b>	Overall accuracy reports.
	Individual target constraint error reporting.
	Cloud constraint Root Mean Square (RMS) error and error histogram.
<b>Import</b>	Point cloud data formats: XYZ, PTS, PTX, LAS, E57, ZFS, DP, FLS, SLW, IXF.
	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.
	Direct Import of Cyclone REGISTER 360 Projects* to improve success with difficult registrations or to bring data into your Cyclone MODEL, SURVEY and other downstream workflows.
	Image/Camera and model data: COE, BMP, TIFF, JPEG, PNG, NCTRI, SPH
	Control data from ASCII & X-Function DBX
<b>Export</b>	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

<b>Operating system</b>	Windows® 7 (32 or 64 bit), Windows® 8 & 8.1 (64 bit only), Windows® 10 (64 bit only)	
<b>HARDWARE</b>	<b>MINIMUM</b>	<b>RECOMMENDED</b>
<b>Processor</b>	2.0 GHz Dual Core processor or better	3.0 GHz Quad Core w/ Hyper-threading or higher
<b>RAM</b>	2 GB (4 GB for Windows 7)	32 GB's or more 64 bit OS
<b>Hard disk</b>	40 GB	500 GB SSD Drive
<b>Large project disk option</b>		RAID 5, 6, or 10 w/ SATA or SAS
<b>Display</b>	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
<b>File system</b>	NTFS	NTFS
<b>Note</b>	Ensure that minimum requirements for both publishing and viewing are observed for best results.	

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

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

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