

Datasheet: LFM Register



LFM Register is unique and extremely powerful, it allows users to take raw data from individual scan positions and bring them together into a fully coordinated framework faster and more efficiently than any other package. It is so innovative that it saves the user time in the office and in the field! The registration process is project critical. LFM Register ensures accurate registration and therefore accurate data. Data registered in LFM can be used with server packages from other laser scanning software vendors.

Key features

Registration Methods

- Target
 - Chess Board Target (Paper or professional)
 - Auto Targets
 - Spheres
- Non-Target
 - Inter-cloud registration (Iterative Closest Point)

Accuracy

- Bundle Adjustment - accuracy levels akin to traditional survey tools

Productivity

- Minimise field time
 - Register data in the office
 - Control survey optional
- Distance and Diameter measurements within the *BubbleView™*
- Target Position and Target Identification
- Direct reading of Control Survey

Quality Control & Reporting

- Traffic Lights immediately show quality of registration
- Detailed registration reporting and analysis

Target Prediction - accurately predict the location of simple survey targets

With Target Prediction the user only needs to locate one or two targets in the scan data and LFM Register automatically fits and locates the remaining ones. This process is mirrored with respect to identification / naming of the targets. Although the Target Prediction algorithm would normally base its predictions on a control survey, when there is little or no control survey present, it will incrementally create its own control for this purpose.

Automate the entire registration process with *AutoTargets™*

LFM Register is able to accommodate Z+F *AutoTargets™*. By using LFM Register with *AutoTargets™* from Z+F, the whole registration process can be automated, removing the need for an intervening operator.

Traffic light metrics immediately display the quality of registration

Green, amber and red colored lights provide a measure of quality of fit against a user defined threshold.

Accurately register scan to scan with Intercloud Registration

Intercloud Registration allows the user to register scans accurately without the use of targets. This feature is very useful for small projects or on larger projects where inevitably there may be scans with a single or no targets visible. Intercloud registration refines the registration between the image data until a perfect fit is achieved.

Bundle Adjustment increases accuracy allowing the user to reduce or opt out of conducting a control survey

Bundle Adjustment is a software process that leads to higher levels of accuracy

that until now have been associated with traditional survey instruments. LFM Register allows the user to 'bundle adjust' laser scan data. Trials have shown that as much as 50% less control work may be needed when using bundle adjustment, in some cases, the user has been able to opt altogether out of conducting a control survey. Bundle adjustment allows the user to save time in the field whilst still producing high quality results.

Data Filtering and Data Clipping

LFM customers like the flexibility to manipulate their 3D laser scan data. Data can be filtered and edited using different parameters. The near and far range can also be clipped and rogue points removed from the data. Points are never deleted, it is always possible to revert back to the original laser scan data. This is invaluable where a client seeks proof of an automatic and complete data set.