



DESIGNED TO GIVE SURVEYORS FLEXIBILITY WITH INSTRUMENTATION AND CODING TO PROVIDE THE ULTIMATE SURVEY TOOL. THE SURVEY MODULE HAS BEEN DEVELOPED IN CONSULTATION WITH SURVEYING INDUSTRY LEADERS.

**A Powerful & New Surveying, Terrain Modelling & Civil Engineering Application.**

***This module is “Best in Class” tool for the topographic, cadastral and engineering surveyor who demands better productivity while downloading, checking and editing field information.***

The 12d survey module allows direct upload and download to all major surveying instruments; Leica, Trimble, Sokkia, Topcon, Nikon, Geodimeter.

Users are able to reduce survey data, apply adjustments and transformations, create and label subdivision (estate) lots, create traverse spreadsheets, and create and upload set out data.

 12D SURVEY BRINGS THE POWER OF THE FIELD TO THE OFFICE (WITH 12D FIELD), ENABLING USERS TO RESPOND QUICKLY TO PROJECT DEMANDS

### **12d Field - Enhancing The Survey Module!**

***With the release of 12d Model Version 9 surveyors and engineers have the option to add further functionality with the powerful 12d Field Module.***

This add on option provides direct control of Motorised Total Station Theodolites and direct feed of GNSS position data. Live on screen using daylight readable PC Tablet technology

## **FUNCTIONS & FEATURES**

### **Survey Data Reduction.**

**Raw surveyed data from the instrument is downloaded via serial cable or PC card and converted to 12d Model's 'Field File', ready for reduction.**

- ✓ Measurements can be checked, edited and adjustments applied to field data
- ✓ 12d's **mapping file**, automatically sets string/point properties.
- ✓ Based on field coding the **mapping file**, 12d Survey, strings points, applies attributes, line styles, symbols, colours, solid fills, line weights and text labelling to all surveyed features, the data can also be separated onto different models (layers).
- ✓ **Field Templating** is supported, allowing dramatic increases in field productivity.
- ✓ **12d Models Field File** provides an audit trail for Quality Assurance

### **Traverse, Adjustments, and Transformations.**

***The highest standards for management and manipulation for the surveyor's co-ordinate systems are available to users through the 12d Model Survey option.***

Manage, manipulate and move survey data to position within local and global systems.

- ✓ Handle complex networks and adjustments using 12d Models traverse editor.
- ✓ Adjustment method options - Transit, Bowditch, Crandall, Compass or Least Squares.
- ✓ Utilise solar and star reductions without requiring almanac details.
- ✓ Geodetic interactive reporting of longitude and latitude, easting and northing, projection bearing and distance, and ellipsoid distance. Full geodetic calculations.
- ✓ Zone to Zone and general conversions between Latitude/Longitude and Universal Transverse Mercator (UTM) projections, Transverse Mercator and most other projections.

# SURVEYING

- ✓ Global transformation methods - affine, 2D and 3D Helmert, seven parameters and NTv2 Grids. These include converting between different co-ordinates systems all over the global.
- ✓ Elevation (height) adjustments including a simple constant, user defined planes or different surfaces.

## Construction Surveying

**12d Model Survey provides a seamless interface with all major surveying instrument formats.**

- ✓ Export and upload **Setout** data to Total Stations and GPS controllers
- ✓ Detailed set-out formats for point locations, triangulated surfaces, centre line alignments, design cross sections and pavement layers.
- ✓ Produce reports for set-out data automating the surveyors field file data.

## As Built & Conformance Survey Reports

**12d Model Survey gives surveyors and engineers the tools to manage construction Quality Assurance requirements, ensuring contractual obligations are completed to the highest standards.**

- ✓ Users can automate pavement and earthworks batter conformance surveys. Reporting tolerance information to fully manage your quality assurance requirements
- ✓ Compare and report surveyed data to design points, strings and triangulated surfaces.

## Machine Automation Data

**12d Model strives for continuous development with machine automation manufacturers to provide our users with simple one step conversions for office to machine (and back).**

12d Model Survey module provides surveyors and engineers the tools to directly export machine automation data formats to Topcon and Leica systems.

## 12d® Survey Is A Module Of The 12d® Model™ Suite.

**12d® Solutions has developed a complete and integrated product for the industry. Surveyors and engineers now have a complete solution at their disposal.**

The core functionality of 12d Model is in the powerful BASE module. Optional modules can be included for the following areas:

- ✓ Road & Rail Design
- ✓ Earthworks/ Volume Calculation
- ✓ Utilities & Urban Drainage
- ✓ Flood Modelling
- ✓ Field (12d Survey Required)
- ✓ Data Exchange
- ✓ Visualisation

## High Quality, Responsive Local Support.

**Support is provided by someone who knows the industry, the type of work you do and your clients requirements.**

All support personnel are expert 12d Model operators, have industry experience and are able to provide practical, relevant solutions to technical problems.

## WHY CHOOSE 12D?

- ✓ Powerful data processing & intelligent functionality.
- ✓ Modular, easy to update & completely customisable.
- ✓ Seamless integration with major industry software & hardware.
- ✓ Used in over 55 countries worldwide.
- ✓ Friendly support & training from industry experts.

