

OFFICE SOFTWARE SPECIFICATONS

The software shall offer the freedom to use any survey instrument required for the job: 1) digital level; 2) laser rangefinder; 3) survey-grade GPS receiver; and, 4) a robotic or conventional total station.

The software shall be designed to handle every type of survey data and shall have data integration capabilities. It shall be able to read-in data such as:

1. Manufacturer's field software files containing any combination of data from real-time and raw GPS, conventional and robotic (both from the manufacturer and from third-party) and laser rangefinder observations.
2. Real-Time Kinematic (RTK) GPS data
3. Raw GPS data, both from the manufacturer and RINEX
4. Direct download from the manufacturer's optical total stations
5. Raw conventional observations from the manufacturer's controllers
6. Raw conventional observations in other manufacturers' native formats
7. Digital level data
8. Road design data in more than 20 different native formats used worldwide
9. Custom ASCII data

The software shall support a two-way flow of digital data, allowing data to be loaded into the controller running field software for use in the field, such as:

1. Points of all kinds, including control points, data points and design points
2. Datum and projection parameters
3. Digital terrain models (grid or TIN)
4. Geoid models
5. combined datum grid files
6. Road design files – complete with full alignment geometry
7. Feature and attribute libraries
8. GIS data dictionary files

The software shall have the capability to export data in any one of over 30 data formats for third-party survey, design, CAD and GIS software including: AutoCAD, ArcView, MapInfo, Microstation and many more. It shall be capable of sharing observations between two projects while maintaining all data.

The software shall be capable of importing cross-section data to use as templates. It shall be capable of importing the following types of design files:

1. AutoDesk Civil Design, DaiCE, CLIP
2. Cremer, DRD EaglePoint
3. FastMap, Geodimeter, Geopak
4. InRoads, ISPOLIstram, Leica RoadEd
5. ModelMaker, MXROAD, NRG
6. REB, SELM, SDMS
7. SDRmap, Teku CAD, Terramodel
8. TRIMMAP, Wild

The software shall be capable of graphically displaying, editing and loading design data into the manufacturer's field software as a file for stakeout on site. The file shall allow horizontal and vertical alignments and templates to be taken into the field, not just a list of points.

The software shall be capable of performing a quality control check of as-staked field positions after transferring back to the office software.

The software shall be capable of creating surface models and performing volume calculations. It shall be capable of importing 3D Faces in AutoCAD format and exporting any surface created in the software I the 3D Faces format. It shall also be capable of importing digital terrain models for stakeout while having the choice of using DTM or Triangulated Irregular Network (TIN)