

INTRODUCTION

Thank you for your interest in MicroSurvey CAD – the most productive and easy-to-use desktop survey software solution ever!

MicroSurvey CAD is a complete desktop survey and design program specifically for surveyors, contractors and engineers. Free to try, there is a 30-day demo available on the MicroSurvey website. Evaluate fully functional versions of the Basic, Standard, Premium, Ultimate and Studio packages. Each edition with different levels of functionality, so you only need to purchase the version that meets your exact business requirements. If those requirements change over time, you can always upgrade your license.

Should you have any questions during your evaluation of MicroSurvey CAD, please call us and we will be pleased to assist you. We look forward to working with you and providing you with an effective business solution.

About MicroSurvey Software Inc.

For more than 30 years, MicroSurvey has developed a family of specialized computer software for land surveyors, civil engineers, mapping technologists, engineering technicians, drafting technologists, police officers, and accident reconstruction specialists. MicroSurvey supports what it builds, and the staff values and listens to its customers.

Our Mission Statement

The MicroSurvey Mission defines the way we do business and how we serve our customers. In 1985, we set out on a mission to create solutions that would offer our industry innovative technology and exceptional value.

The way we perceive and react to the ever-changing worldwide business climate continues the MicroSurvey tradition of innovation and value.

We engineer technology that is designed to work the way people think. We empower people – not machines.

Our solutions for surveying, construction, engineering and accident reconstruction are inspired by our uncompromising standards for integrity, quality, leading-edge technology, support and value.

OVERVIEW



A DESKTOP SURVEY AND DESIGN PROGRAM CREATED FOR SURVEYORS, CONTRACTORS, AND ENGINEERS

No plug-ins or modules are necessary. Complete survey drafting, COGO, DTM, traversing, volumes, contouring and data collection interfacing are included. MicroSurvey CAD is compatible with field data from all major total stations and data collectors and is fully compatible with AutoCAD®.

Surveyors all over the world use MicroSurvey CAD to complete their infrastructure and design projects. MicroSurvey has been building software for the surveying industry for over 30 years and with all this experience, we are able to offer the **best** surveying CAD software package available today.

We understand that not everyone needs a full-featured package, so we offer four different options. Our **Basic** edition has core surveying computation tools and just enough CAD tools to draft a plan. The **Standard** edition has all the features of Basic, plus a full CAD engine. The **Premium** edition contains advanced design capabilities. The **Ultimate** edition has all advanced surveyor tools plus point cloud capabilities. And lastly, the **Studio** edition has everything described above, plus professional keyframe-based animation capabilities.

MicroSurvey has been developing its desktop software on the IntelliCAD engine for over 10 years. Building our desktop products on the latest IntelliCAD engine provides MicroSurvey users with the most up to date core technology available on the market today. MicroSurvey CAD opens and saves AutoCAD drawing files and uses DWG as its native format. IntelliCAD's command set, toolbar and menu structure is very similar to AutoCAD, so you can install MicroSurvey CAD into existing AutoCAD environments with ease!

We value and listen to our customers and we support what we build. MicroSurvey's technical support has been ranked number one by industry professionals and our customer service is world class. MicroSurvey CAD includes over **12 hours** of extensive training movies, which equates to reading thousands of pages of manuals. Learning while you work has never been this easy.

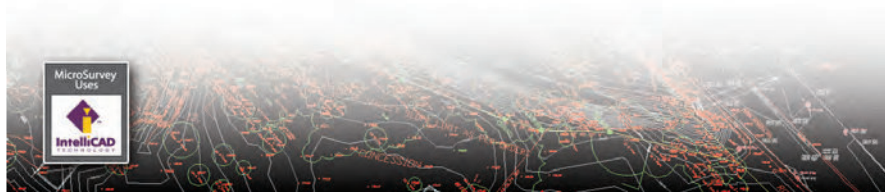


MicroSurvey CAD FEATURES

THE VALUE OF INTELICAD

With the IntelliCAD engine, the customization, scripting and programming capabilities of MicroSurvey CAD set it apart in the market and make it more comparable to full AutoCAD based products. The interface is similar to AutoCAD, so the learning curve is almost nonexistent for an AutoCAD trained user. Users familiar with Autodesk products can be productive in MicroSurvey CAD in a matter of hours, not day, weeks or months.

MicroSurvey CAD is compatible with AutoCAD files. With MicroSurvey CAD, all your files are stored in industry standard DWG format. No conversions are necessary.



A POWERFUL POINT CLOUD ENGINE

For 2016, Ultimate and Studio editions are powered by Leica EpcA (Embedded Point Cloud for Applications). This is the same point cloud engine that powers other Leica applications including Cyclone and CloudWorx. Leica Cyclone is used as the native point cloud database. Point cloud data can be imported from most hardware manufacturers, Lidar systems, or aerial photogrammetry systems.

Point Cloud data is displayed directly within your CAD model space, and you can snap to the point cloud points using standard CAD tools. Dozens of new point cloud tools are now available for working with your point cloud data...

With features like surface modeling & contouring from point cloud data, you will be amazed at the possibilities.



MicroSurvey CAD FEATURES



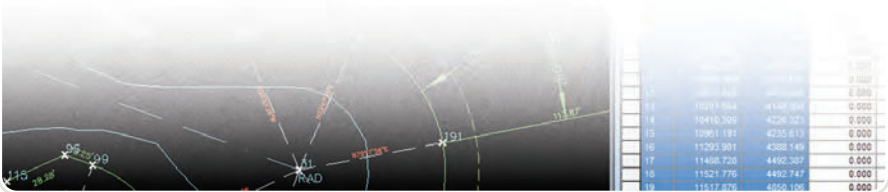
MICROSURVEY'S ACTIVE DRAWING TECHNOLOGY

MicroSurvey's active drawing technology is an efficient way to work with your survey data. It enables verification, editing, printing and manipulation of data in the drawing, in the coordinate and traverse databases, and during COGO calculations.

Active Coordinate Editor. Dynamically view and edit coordinate data with changes reflected immediately in both the coordinate editor window and in the drawing window. MicroSurvey CAD operates intuitively: Selecting a point in the drawing will open the editor and highlight that coordinate in the editor automatically. Alternatively, selecting a coordinate in the editor will zoom to that point in the drawing.

Active Traverse Editor. Verifying and editing your raw data is now much faster and allows for painless correction. Traverse data is represented in a smart, spreadsheet-like editor that has incredible drag and drop capabilities. The active traverse editor not only allows you to work with your raw data at any point in the traverse quickly, but it also allows customization of the views available and opens multiple traverse data sets simultaneously. Errors in your traverse data are amazingly easy to spot and fix.

Active Batch COGO. Batch COGO is a system for data entry and calculation that allows you to browse an entire COGO entry history, quickly identify errors and easily make changes. At any point, COGO entries can be edited and reprocessed with the correction immediately reflected in the drawing. The interface is built with smart tags for data types like traverse, bearing-bearing intersection, distance-distance intersection and more. MicroSurvey's active batch COGO is like nothing else on the market!





MicroSurvey CAD FEATURES

POWERFUL DTM CONTOURING/MODELING VOLUMES

MicroSurvey CAD creates surface models at lightning speed. With very fast modeling engines, you can manipulate surfaces by adding or removing points, work with breaklines, and create boundaries. We stopped testing triangulation speed when it broke through the 100,000-points-per-second level. Visualization in MicroSurvey CAD is unmatched with fast 3D rendered views of TINS, grids, and triangulated grids.

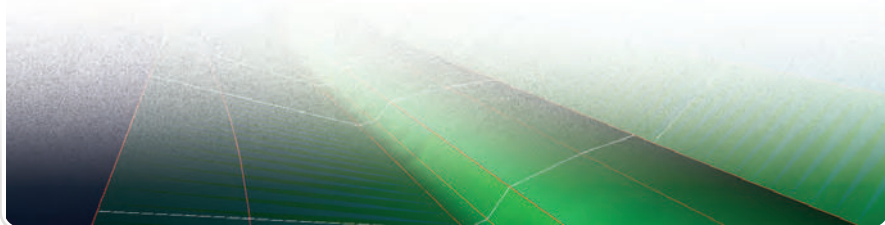
- Full 3D rendering
- Virtually unlimited point capability
- Simple to use: Create a DTM and contour in four simple steps



COMPLETE SITE DESIGN

MicroSurvey CAD's road design wizard makes creating a 3D road along a horizontal and vertical alignment a snap. Creating templates is easy with our graphical template editor. Multiple passes can be made down a road with various templates to create a multi-level surface.

- Site Design: Ponds, ditches, stockpiles and slopes
- Road Design: Horizontal and vertical alignments, cross sectional templates
- Create cross sections of existing ground and design surfaces



MicroSurvey CAD FEATURES



TOP PRODUCTIVITY ENHANCEMENTS

Powerful Survey Calculations

- COGO – MicroSurvey has the simplest, most productive COGO entry inside a CAD system. Record all of your COGO entries automatically with our Batch system. Edit the Batch with a spreadsheet style editor and reprocess!
- Data collector communication: MicroSurvey CAD is designed to work with data from all major total stations and data collectors
- Helmerts Transformation
- Multi-point averaging, cluster analysis, right of ways, areas, fixed areas, mass intersections, multiple perpendicular ties, stake computations, the list is endless
- Coordinate transformations – easily transform data from one system to another (UTM, State Plane, MTM, etc.)

Complete Traverse or Network Adjustments

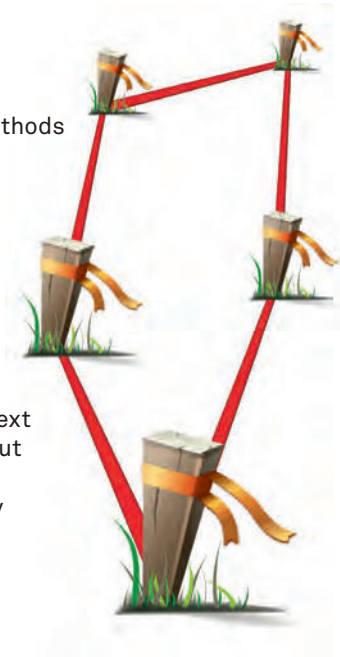
- Angle balance
- Transit, compass, Crandall's Classical Methods
- Vertical balance
- Full 3D least squares adjustment
- Blunder detection
- Instrument storage
- Graphical ellipse display
- Reprocessing and pre-analysis

Smart Information

- Smart objects: lines, points, curves and text
- Pick and edit objects automatically without initiating a command
- Browse the entire coordinate database by simply picking any point in your drawing

Customizable Interface and Commands

- Completely customizable user interface
- "Drag and drop" toolbars to customize your workflow
- Reorganize menus with our graphical menu editor
- Screen items can be turned off for larger graphics area
- Layout of command window – top or bottom





MicroSurvey CAD FEATURES

MicroSurvey CAD EDITION COMPARISON

Studio
Ultimate
Premium
Standard
Basic

MicroSurvey CAD EDITION COMPARISON	Studio	Ultimate	Premium	Standard	Basic
Read/write AutoCAD DWG and DXF files	•	•	•	•	•
AutoCAD linetype, hatch file, shape file, font file compatible	•	•	•	•	•
Full COGO Calculations	•	•	•	•	•
Full alpha-numeric point identifiers	•	•	•	•	•
Create lots and blocks quickly and efficiently	•	•	•	•	•
Create and place buildings or structures with flexible input	•	•	•	•	•
Efficient staking programs: compute stakes, select points with all CAD commands and generate automatic reports for field crews	•	•	•	•	•
Automated block/lot creation with dynamic building pad placement	•	•	•	•	•
Right-of-way design	•	•	•	•	•
Coordinate transformations (SPC, UTM and more)	•	•	•	•	•
Data collector interfacing (all major brands)	•	•	•	•	•
Traverse coordination, closure, balancing	•	•	•	•	•
Active drawing technology – coord. editor, traverse editing, batch COGO	•	•	•	•	•
Survey calculations – linear regression, clusters; line, curve and point calc	•	•	•	•	•
Field-to-finish diagramming, layering, symbol placement	•	•	•	•	•
Bearing, distance, elevation, description, number placement	•	•	•	•	•
Full suite of text commands - text, sliding, rotating, scaling, spell checking, plus advanced text placement tool	•	•	•	•	•
Basic editing commands – move and rotate	•	•	•	•	•
Basic drawing commands – line, arc, point	•	•	•	•	•
3D least squares adjustment with blunder detection, custom instrument settings, graphical ellipse plotting	•	•	•	•	
Comprehensive drawing commands – Dtext, Mtext, line, arc, point, 2&3D polyline, hatching, splines, curve fitting, 3D faces, polyface mesh, more...	•	•	•	•	
Powerful editing commands – trim, extend, fillet, chamfer, copy, more...	•	•	•	•	
Raster imaging – georeferenced TIFFs, JPG, BMP, Digital Photo support	•	•	•	•	
Surface modeling – TIN, Grid, TGrid	•	•	•		
Contouring	•	•	•		
Multi-surface volume and bound area volume calculations	•	•	•		
Sewer drafting	•	•	•		
Alignment design and labeling	•	•	•		
Cross section template editor	•	•	•		
Profile plotting & vertical alignment design	•	•	•		
Cross sectioning calculations and plotting	•	•	•		
3D Surface model visualization with rendering	•	•	•		
Site Design (grading and volumes)	•	•	•		
Point cloud engine and advanced visualization tools	•	•			
Cutting cubes, profile slices and visibility toggles	•	•			
Automated point line extraction and line snapping from point cloud data	•	•			
Surface modeling and contouring from point cloud data	•	•			
Lowest point (by grid) and bare earth routines	•	•			
Display point cloud inside CAD drawing	•	•			
Professional keyframe-based animation editor	•				
Animated objects and cameras for fly-throughs and simulations	•				
Numerous export options (AVI, MPG, DivX, MOV, and more)	•				

HARDWARE SUPPORT



MAJOR HARDWARE DATA COMPATIBILITY

MicroSurvey CAD is compatible with data from all major total stations and data collectors. Field Data downloads are a fast and easy when you use complementary MicroSurvey FieldGenius data collection software. For a complete list of devices supported please see the web page and contact information supplied on the first or last page of the brochure.

Hardware Requirements

MicroSurvey CAD runs on Windows operating systems (Windows Vista through Windows 10). We suggest the following basic system requirements as a minimum for efficient operation:

- Pentium processor – 2GHz or better
- 2GB RAM (or more if you are working in large drawings)
- 10 gigabytes free hard disk space
- Video resolution set to 1024x768 or higher
- Mouse, digitizing tablet or other pointing device
- Available USB port for the USB license key

If you are uncertain about your hardware efficiently running our software, please do not hesitate to contact our sales or support representatives for more information.

In order to use the data collector communication features, your system will also need an external RS-232 serial port or a USB connection for the best performance with MicroSurvey FieldGenius.





TESTIMONIALS

READ WHAT PROFESSIONALS IN THE FIELD HAVE TO SAY

"MicroSurvey CAD meets the main criteria that I, and I think most surveyors, are looking for. It provides a package that is easy to use, increases productivity, and won't set a small to medium sized firm's budget on its ear. If the user is even vaguely familiar with AutoCAD or one of MicroSurvey's previous products, then the learning curve is nonexistent. This is one of the most user friendly applications that I have seen in nearly thirty years of using computers!"

John Gallagher

of Robert B. Holzman, PLS

"MicroSurvey excels at training through their product videos. If you have a question about a feature, chances are that they will have a video that will show you how it's done. If you are like most other surveyors, you need to get up to speed as quickly as possible with new software. As the software becomes more feature rich and complex, manuals just don't cut it anymore, except for quick reference. The videos are all short and to the point, laying out the procedures for only one or two commands in each segment. I was able to use them and get up to speed very quickly.

Adding to the wonderful training videos, the fact that the IntelliCAD engine (on which MicroSurvey is based) is so AutoCAD familiar, I really didn't feel like I was making a huge leap in using their software. If you are in the market for CAD software, you will certainly want to give these guys a look. Solid COGO, Surface modeling, and a number of great tools all on top of real dwg files at a price that won't break the bank ... this software is definitely worth considering..."

Shawn Billings, LS

Texas

"MicroSurvey has bridged the difficulties of complex COGO needs with a professional drafting platform for surveyors. Coming from an AutoCad background, the transition to yet another survey software program was not a problem with MicroSurvey. Most of the questions I had were well explained in the training movies that came with the program. When I needed more technical assistance in managing the connectivity to my Leica TCR, help was immediate and without the delays encountered in some of the other developers I had tried. One of my better business decisions was to select MicroSurvey."

Wm. Brannon, LS

New York

