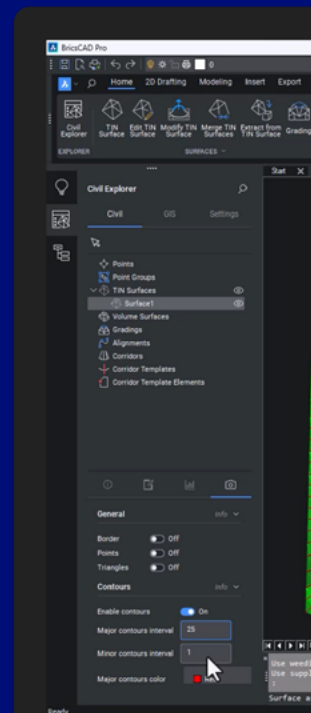
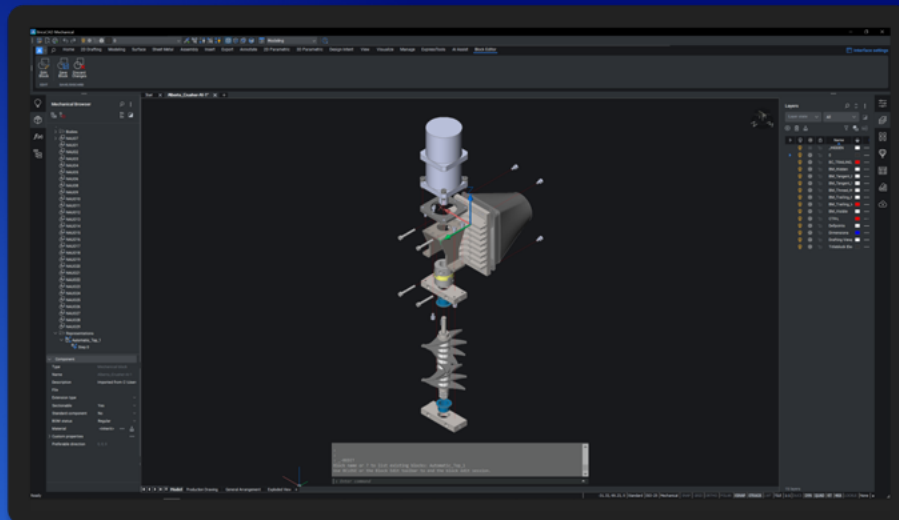
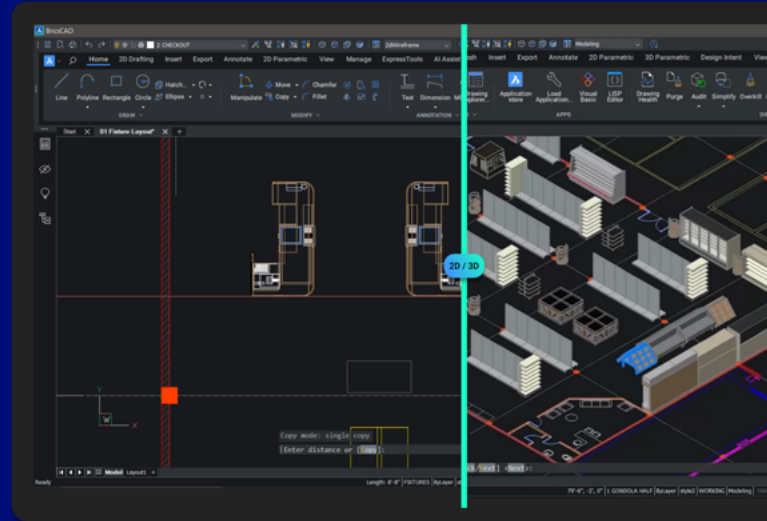
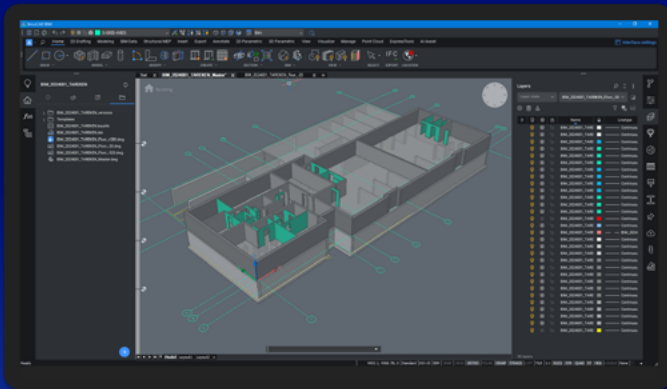


# Feature Comparison Matrix BricsCAD®, AutoCAD®, ZWCAD, GstarCAD

January 2024



## Legend

- ✓ Feature /Function is available
- Feature /Function is not available
- ✓ Feature /Function is available, but BricsCAD functionality is superior
- Limitations to this Feature / Function

## Key Differentiating Capability

This first chart highlights the main capability in BricsCAD® that we use to differentiate ourselves against the competition.

This is a summary guide for sales teams which outlines those features we should be discussing and showcasing in competitive situations, or when looking to replace AutoCAD®, which are unique to us and give us a functional advantage.

	BricsCAD®		AutoCAD®		ZWCAD		GstarCAD		
Feature	Lite	Pro	LT	Full	Std	Pro	Std	Pro	
<b>Interface</b>	<b>Interface</b>								
Contextual Quad Menu	✓	✓	-	-	-	-	-	-	The Quad conveniently and automatically makes recently used functions clearly available, and intelligently predicts what you want to do next. This saves effort and time, and increases user productivity.
Searchable Settings Variables Dialog Box	✓	✓	-	-	-	-	-	-	All 900+ system variables and user preferences are centralized in a single, searchable dialog box called Settings.
Drawing Explorer	✓	✓	-	-	✓	✓	-	-	The Drawing Explorer enables all the key aspects of a drawing to be managed in one comprehensive, single place, providing a fast, effective way to configure a drawing. It is especially useful when managing large or complex drawings. BricsCAD functionality is superior to others.
Structure Browser	✓	✓	-	-	-	-	-	-	The Structure Browser shoes all information within a drawing in one single location, enabling greater understanding of the drawing structure, and to find individual or groups of elements quickly.
<b>Selection, Snap &amp; Track</b>	<b>Selection, Snap &amp; Track</b>								
Nearest Distance	✓	✓	-	-	-	-	-	-	When two entities are selected, BricsCAD automatically displays a measurement of the distance between their nearest points, essentially acting as an automatically applied temporary constraint. This feature makes geometry editing much easier, requiring only one value to be changed rather than additional functions applied.
Adaptive Grid Snap	✓	✓	-	-	✓	✓	✓	✓	Adaptive Grid Snap automatically applies a grid snap that dynamically adapts to the current zoom level. It enables you to draw and edit more accurately with less keyboard entry. BricsCAD functionality is superior to others.
<b>Editing Tools</b>	<b>Editing Tools</b>								
CopyGuided / MoveGuided	✓	✓	-	-	-	-	-	-	Copy guided is a very powerful, intelligent tool which combines copying geometry, positioning it appropriately, and modifying its surrounding entities all in one easy function. MoveGuided does all of that, as well as healing of the geometry around the moved item. This saves you considerable time and effort.
Manipulator (3D Gizmo)	✓	✓	-	✓	-	-	-	-	The Manipulator is far more convenient than using a combination of functions, such as move and rotate, especially when multiple manipulations are required. It's very easy to use and, when used in conjunction with direct modelling tools, is a powerful way to model shapes very quickly.
Drawing Health Management	✓	✓	-	-	-	-	-	-	Drawing Health combines the functionality of multiple stand-alone BricsCAD commands: PURGE, AUDIT, SIMPLIFY, OVERKILL, BLOCKIFY, OPTIMIZE and more. This allows you to reduce drawings size, remove unused styles, entities and layers, and improve the overall drawing quality, all in just a few clicks.

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	BricsCAD®		AutoCAD®		ZWCAD		GstarCAD		
Feature	Lite	Pro	LT	Full	Std	Pro	Std	Pro	
<b>Editing Tools</b>									
Optimize	✓	✓	-	-	-	-	-	-	Optimize tidies entities which are not quite geometrically correct, such as lines which are slightly out of line, or where there are small gaps between entities which should be closed. It ensures a much more valid and accurate drawing.
Simplify	✓	✓	-	-	-	-	-	-	Simplify is a drawing optimization tool which automatically simplifies a polyline by dramatically reducing the number of vertices, improving the manageability and performance of the drawing.
<b>Reference Tools</b>									
Block Face Camera	✓	✓	-	-	-	-	-	-	This option ensures that a block always faces the camera as you orbit around the model, making navigation in 3D easier and quicker.
Blockify	✓	✓	-	-	-	-	-	-	Blockify enables a block to be created from a set of 2D or 3D entities, and then looks for similar sets of entities and automatically converts those to the same block. This reduces drawing complexity, makes drawings more manageable, and makes future drawing edits faster and easier.
Parametric Blockify	-	✓	-	-	-	-	-	-	Parametric Blockify is similar to Blockify, but it uses a parameterized set of entities as input. It will then look for any geometry of the same form which fits the range of the parameters of the original block, and replace it with that block, setting the correct parameter values.
<b>Point Cloud Tools</b>									
Native tools for working with Point Clouds	-	✓	-	✓	-	✓	✓	✓	BricsCAD® Pro contains tools for working with multiple point cloud formats, with tools for attaching, aligning, cropping and using color maps, no plugins needed. GstarCAD only works with .RCP or .RCS format, and has less functionality than BricsCAD.
<b>Modeling Tools</b>									
Twist / Multi-Slice / 3D Parametric Design Tables	-	✓	-	-	-	-	-	-	BricsCAD offers more modeling tools, and combines free direct modelling with constraints and parameters, offering a unique variational 3D design approach. This helps address the design process from initial concept to finalized product much more effectively.
T Connect, L Connect, Connect with Nearest	-	✓	-	-	-	-	-	-	These tools provide a fast and effective way to join two solids in exactly the form required, using one simple command, ensuring design intent is captured correctly without having to waste time manually trimming multiple times.
<b>Licensing</b>									
License options to suit your needs	✓	✓	✓	✓	✓	✓	✓	✓	BricsCAD can be accessed via many licence types, including perpetual, network, subscription and academic. BricsCAD offers more licencing options, so that organizations can choose the right license for them in terms of cost and flexibility.

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## Full Feature Comparison

This chart outlines all of the capability areas in BricsCAD® and our competition, providing a comparison between them for each feature.

This is a guide for technical teams, such as Pre-sales, highlighting features where we are either unique or comparable to the competition.

Feature	BricsCAD®		AutoCAD®		ZWCAD		GstarCAD	
	Lite	Pro	LT	Full	Std	Pro	Std	Pro
<b>Drawings</b>	<b>Drawings</b>							
Native DWG File Format (thru AutoCAD® 2023)	✓	✓	✓	✓	✓	✓	✓	✓
Password Protection	✓	✓	-	-	✓	✓	✓	✓
eTransmit	✓	✓	✓	✓	✓	✓	✓	✓
Sheet Set Manager	✓	✓	✓	✓	✓	✓	✓	✓
Geographic Location	✓	✓	✓	✓	✓	✓	✓	✓
Drawing Compare	✓	✓	✓	✓	✓	✓	✓	✓
Cloud Collaboration	✓	✓	✓	✓	✓	✓	✓	✓
<b>Interface</b>	<b>Interface</b>							
Dark and Light Color Themes	✓	✓	✓	✓	✓	✓	✓	✓
Industry Standard Commands, Aliases, and Variables	✓	✓	✓	✓	✓	✓	✓	✓
Command Line (Autocomplete, Midstring, Clickable options)	✓	✓	✓	✓	✓	✓	●	●
Start tab	✓	✓	✓	✓	-	-	-	-
File (Drawing) tabs	✓	✓	✓	✓	✓	✓	✓	✓
Model and Layout tabs	✓	✓	✓	✓	✓	✓	✓	✓
Layout Manager	✓	✓	-	-	-	-	●	●
Menu bar	✓	✓	✓	✓	✓	✓	✓	✓
Toolbars	✓	✓	✓	✓	✓	✓	✓	✓
Ribbon	✓	✓	✓	✓	✓	✓	✓	✓
Tool Palettes	✓	✓	✓	✓	✓	✓	✓	✓
Contextual Right-click Menus	✓	✓	✓	✓	✓	✓	✓	✓
Contextual Quad Menu	✓	✓	-	-	-	-	-	-
Status Bar	✓	✓	✓	✓	✓	✓	✓	✓
Workspaces	✓	✓	✓	✓	✓	✓	✓	✓
Searchable Settings (Variables) Dialog Box	✓	✓	-	-	-	-	-	-
Lockable Interface	✓	✓	✓	✓	✓	✓	✓	✓
Clean Screen Mode	✓	✓	✓	✓	✓	✓	✓	✓
Drawing Explorer	✓	✓	-	-	✓	✓	-	-
Customizable User Interface (CUI)	✓	✓	✓	✓	✓	✓	✓	✓
Drawing Structure Browser	✓	✓	-	-	-	-	-	-
<b>Selection, Snap &amp; Track</b>	<b>Selection, Snap &amp; Track</b>							
Selection Filtering (QSELECT)	✓	✓	✓	✓	✓	✓	✓	✓
Add Selected	✓	✓	✓	✓	✓	✓	✓	✓
Select Similar	✓	✓	✓	✓	✓	✓	✓	✓
Selection Cycling	✓	✓	✓	✓	✓	✓	✓	✓

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	BricsCAD®		AutoCAD®		ZWCAD		GstarCAD	
Feature	Lite	Pro	LT	Full	Std	Pro	Std	Pro
<b>Selection, Snap &amp; Track</b>	<b>Selection, Snap &amp; Track</b>							
Entity Snaps (Osnaps)	✓	✓	✓	✓	✓	✓	✓	✓
Polar Tracking	✓	✓	✓	✓	✓	✓	✓	✓
Zintersection 3D snap	✓	✓	-	-	-	-	-	✓
Nearest Distance	✓	✓	-	-	-	-	-	-
Adaptive Gridsnap	✓	✓	-	-	✓	✓	✓	✓
Real-time boundary detection	✓	✓	-	-	-	-	-	✓
2D Dynamic UCS	✓	✓	-	-	✓	✓	✓	✓
3D Dynamic UCS	✓	✓	-	✓	✓	✓	✓	✓
<b>Drawing Tools</b>	<b>Drawing Tools</b>							
Line, Polyline, 3D Polyline, Spline, Ray, Xline	✓	✓	✓	✓	✓	✓	✓	✓
Multiline and Multiline Styles	✓	✓	-	✓	✓	✓	✓	✓
Circle, Arc, Ellipse, Elliptical Arc	✓	✓	✓	✓	✓	✓	✓	✓
Polygon, Rectangle, Region, Donut, Point	✓	✓	✓	✓	✓	✓	✓	✓
Helix	✓	✓	-	✓	✓	✓	✓	✓
2D Parameters, Constraints	✓	✓	-	✓	✓	✓	✓	✓
2D Auto-constrain	✓	✓	●	●	-	-	-	-
Calculator	✓	✓	✓	✓	✓	✓	-	-
<b>Annotation Tools</b>	<b>Annotation Tools</b>							
Dimensions, Dimension Styles	✓	✓	✓	✓	✓	✓	✓	✓
Quick Dimension	✓	✓	✓	✓	✓	✓	✓	✓
Multi-leaders, Multi-leader Styles	✓	✓	✓	✓	✓	✓	✓	✓
Single and Multi-line text, Text Styles, Text Editor	✓	✓	✓	✓	✓	✓	✓	✓
Hatches, Gradients, Hatch/Gradient Editor	✓	✓	✓	✓	✓	✓	✓	✓
Wipeouts	✓	✓	✓	✓	✓	✓	✓	✓
Revision Clouds	✓	✓	✓	✓	✓	✓	✓	✓
Attributes, Attribute Editor	✓	✓	✓	✓	✓	✓	✓	✓
Tables, Table Styles	✓	✓	✓	✓	✓	✓	✓	✓
Fields	✓	✓	✓	✓	✓	✓	✓	✓
Data Extraction	✓	✓	-	✓	✓	✓	✓	✓
Data Linking	✓	✓	✓	✓	✓	✓	✓	✓
Annotation Scaling	✓	✓	✓	✓	✓	✓	✓	✓
Spell Check	✓	✓	✓	✓	✓	✓	✓	✓
<b>Editing Tools</b>	<b>Editing Tools</b>							
Move, Copy, Rotate, Scale, Stretch, Mirror, Align	✓	✓	✓	✓	✓	✓	✓	✓
Trim, Extend, Lengthen, Break, Join	✓	✓	✓	✓	✓	✓	✓	✓
Fillet, Chamfer	✓	✓	✓	✓	✓	✓	✓	✓
CopyGuided	✓	✓	-	-	-	-	-	-
MoveGuided	✓	✓	-	-	-	-	-	-

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Feature	BricsCAD®		AutoCAD®		ZWCAD		GstarCAD	
	Lite	Pro	LT	Full	Std	Pro	Std	Pro
<b>Editing Tools</b>	<b>Editing Tools</b>							
Grip Edit	✓	✓	✓	✓	✓	✓	✓	✓
Properties Panel	✓	✓	✓	✓	✓	✓	✓	✓
Manipulator (3D Gizmo)	✓	✓	-	✓	-	-	-	-
Draworder	✓	✓	✓	✓	✓	✓	✓	✓
Undo Per Entity (Property History)	✓	✓	-	-	-	-	-	-
Optimize	✓	✓	-	-	-	-	-	-
Simplify	✓	✓	-	-	-	-	-	-
Drawing Health Management	✓	✓	-	-	-	-	-	-
<b>Reference Tools</b>	<b>Reference Tools</b>							
Blocks, Block Editor	✓	✓	✓	✓	✓	✓	✓	✓
Dynamic Blocks	●	●	✓	✓	●	●	●	●
Block Face Camera	✓	✓	-	-	-	-	-	-
Blockify	✓	✓	-	-	-	-	-	-
Parametric Blockify	-	✓	-	-	-	-	-	-
Associative Arrays	✓	✓	✓	✓	✓	✓	✓	✓
Dwg (Xref) Attach, Clip, Bind, Edit	✓	✓	✓	✓	✓	✓	✓	✓
PDF Attach, Clip	✓	✓	✓	✓	✓	✓	✓	✓
Image Attach, Clip, Adjust, Transparency	✓	✓	✓	✓	✓	✓	✓	✓
<b>Point Cloud Tools</b>	<b>Point Cloud Tools</b>							
Point Cloud Preprocess	-	✓	-	-	-	-	-	-
Attach Point Cloud (LAS, LAZ, PTS, PTZ, e57, RCP, RCS)	-	✓	-	✓	-	✓	✓	✓
Export Point Cloud (LAS, PTS)	-	✓	-	✓	-	-	-	-
Align Point Cloud	-	✓	-	✓	-	-	✓	✓
Crop Point Cloud	-	✓	-	✓	-	✓	-	-
Point Cloud Classify	-	✓	-	-	-	-	-	-
Point Cloud Manager	-	✓	-	✓	-	✓	-	-
Point Cloud Bubble Viewer	-	✓	-	-	-	-	-	-
Point Cloud Color Map	-	✓	-	✓	-	✓	✓	✓
<b>Visualization Tools</b>	<b>Visualization Tools</b>							
Layers, Layer States	✓	✓	✓	✓	✓	✓	✓	✓
Transparency	✓	✓	✓	✓	✓	✓	✓	✓
Visual Styles	✓	✓	-	✓	✓	✓	✓	✓
LookFrom (ViewCube)	✓	✓	-	✓	✓	✓	✓	✓
Match Perspective	-	✓	-	-	-	-	-	-
Lights	-	✓	-	✓	✓	✓	✓	✓
Sun Properties	-	✓	-	✓	-	✓	✓	✓
Materials	-	✓	-	✓	-	✓	-	✓
Render	-	✓	-	✓	-	✓	-	✓

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	BricsCAD®		AutoCAD®		ZWCAD		GstarCAD	
Feature	Lite	Pro	LT	Full	Std	Pro	Std	Pro
<b>Visualization Tools</b>	<b>Visualization Tools</b>							
Animation Editor	-	✓	-	-	-	✓	-	-
Walkthrough navigation	-	✓	-	✓	-	-	-	-
ANIPATH command	-	✓	-	✓	-	-	-	-
Built-in Datasmith Export	-	✓	-	-	-	-	-	-
Built-in Direct Link with Twinmotion/Unreal	-	✓	-	-	-	-	-	-
<b>Modeling Tools</b>	<b>Modeling Tools</b>							
ACIS Modeling	-	✓	-	✓	-	✓	-	✓
Solid and Surface Modeling	-	✓	-	✓	-	✓	-	✓
Solid Primitives	-	✓	-	✓	-	✓	-	✓
Mesh Primitives	-	✓	-	✓	-	✓	-	✓
Polysolid	-	✓	-	✓	-	✓	-	✓
Union, Subtract, Intersect, Interfere	-	✓	-	✓	-	●	-	✓
Extrude, Revolve, Loft, Sweep, Thicken	-	✓	-	✓	-	●	-	✓
Twist	-	✓	-	-	-	-	-	-
Fillet, Chamfer	-	✓	-	✓	-	✓	-	✓
Slice	-	✓	-	✓	-	✓	-	✓
Multi-slice	-	✓	-	-	-	-	-	-
T Connect, L Connect, Connect with Nearest	-	✓	-	-	-	-	-	-
Extract Edges	-	✓	-	✓	-	-	-	✓
Direct Modeling	-	✓	-	✓	-	✓	-	✓
Deformable (Freeform) Modeling	-	✓	-	✓	-	✓	-	-
Audit, Simplify	✓	✓	-	✓	-	-	●	●
Stitch	-	✓	-	✓	-	-	-	-
3D Parameters, Constraints	-	✓	-	✓	-	-	-	-
3D Autoparametrize	-	✓	-	-	-	-	-	-
3D Parametric Design Tables	-	✓	-	-	-	-	-	-
Section Planes	-	✓	-	✓	-	-	-	✓
3D Threads	-	✓	-	-	-	-	-	-
3D Blockify and Parametric Blockify	-	✓	-	-	-	-	-	-
Drawing Views	-	✓	-	✓	-	✓	-	✓
<b>Civil and Survey Tools</b>	<b>Civil and Survey Tools</b>							
TIN Surface Modeling	-	✓	-	-	-	-	-	-
Civil Points	-	✓	-	-	-	-	-	-
TIN Volume Surface	-	✓	-	-	-	-	-	-
Grading	-	✓	-	-	-	-	-	-
Alignments	-	✓	-	-	-	-	-	-
Profiles (Vertical Alignments)	-	✓	-	-	-	-	-	-
Corridors	-	✓	-	-	-	-	-	-

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	Lite	Pro	LT	Full	Std	Pro	Std	Pro
<b>Civil and Survey Tools</b>	<b>Civil and Survey Tools</b>							
Autodesk® Civil 3D Object Enabler	✓	✓	-	✓	-	-	-	-
Boundary Trim	-	✓	-	-	-	-	-	-
GIS Data	-	✓	-	✓	-	✓	-	-
<b>Import, Export, Output</b>	<b>Import, Export, Output</b>							
Print/Plot	✓	✓	✓	✓	✓	✓	✓	✓
Print as JPG	✓	✓	✓	✓	✓	✓	-	-
Print as TIFF	✓	✓	✓	✓	✓	✓	-	-
Print as PNG	✓	✓	✓	✓	✓	✓	-	-
Print as BMP	✓	✓	✓	✓	-	-	-	-
Publish/Batch Plot	✓	✓	✓	✓	✓	✓	✓	✓
Create PDF Bookmarks	✓	✓	✓	✓	✓	✓	-	-
CTB & STB Table Files	✓	✓	✓	✓	✓	✓	✓	✓
PC3 Printer Configuration Files	✓	✓	✓	✓	✓	✓	✓	✓
Named Page Setups	✓	✓	✓	✓	✓	✓	✓	✓
PDF Import, Export	✓	✓	✓	✓	✓	✓	✓	✓
DAE Import, Export	✓	✓	-	-	-	-	-	-
IFC Import, Export	-	-	-	✓	-	●	●	●
3DM Import, Export	-	✓	-	-	-	-	-	-
LandXML Import, Export	-	✓	-	-	-	-	-	-
SKP Import	-	✓	-	-	-	-	-	-
DGN Import	✓	✓	✓	✓	✓	✓	✓	✓
DWF Export	✓	✓	✓	✓	✓	✓	✓	✓
SVG Export	✓	✓	-	-	-	-	-	-
FBX Export	✓	✓	-	-	-	-	-	-
STL Export	✓	✓	-	✓	-	-	✓	✓
Autodesk® Civil 3D data import	-	✓	-	-	-	-	-	-
Additional formats available with Communicator for BricsCAD®	-	✓	-	-	-	-	-	-
<b>Programming</b>	<b>Programming</b>							
ActiveX	✓	✓	✓	✓	✓	✓	✓	✓
Entity Data Editor	✓	✓	-	✓	✓	✓	✓	✓
Script Recorder	✓	✓	-	✓	✓	✓	-	-
Full LISP Support (vl, vlr, vla and vlax)	✓	✓	✓	✓	✓	✓	✓	✓
Solutions Development System (SDS/ADS)	✓	✓	-	✓	-	✓	✓	✓
DCL Engine	✓	✓	-	✓	-	✓	✓	✓
COM API	-	✓	✓	✓	✓	✓	✓	✓
Visual Basic for Applications (VBA)	-	✓	-	✓	-	✓	✓	✓

## Legend

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	BricsCAD®		AutoCAD®		ZWCAD		GstarCAD	
Feature	Lite	Pro	LT	Full	Std	Pro	Std	Pro
<b>Programming</b>	<b>Programming</b>							
VBA DVB projects support	-	✓	-	✓	✓	✓	●	●
.NET	-	✓	-	✓	-	✓	✓	✓
BRX (ARX / ZRX / GRX)	-	✓	-	✓	-	●	✓	✓
TX (Teigha eXtensions)	✓	✓	-	-	-	-	-	-
CUI menu files support, with Diesel expressions	✓	✓	✓	✓	-	-	✓	✓
<b>Licensing</b>	<b>Licensing</b>							
Cross-platform Licenses (Windows, Mac, Linux)	✓	✓	-	-	-	-	-	-
Perpetual	✓	✓	-	-	✓	✓	✓	✓
Subscription	✓	✓	✓	✓	-	-	✓	✓
Network Multi-user	✓	✓	-	-	✓	✓	-	-
Volume (Perpetual)	✓	✓	-	-	●	●	●	●
Academic	✓	✓	✓	✓	✓	✓	●	●