



Complete Features Guide

GstarCAD 2023



GstarCAD 2023 Content

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GstarCAD 2023 Complete Guide

Remarkable Performance and Compatibility

GstarCAD 2023 is greatly optimized in performance by supporting Multi-Core and Parallel processing. The user experience and compatibility are also improved with many practical improvements and over 12 new features, such as supporting the NAVICUBE, Lisp Debugger, Digital Signature and VPSYNC, as well as compatibility with ObjectARX APIs, improving the display of Palettes, and providing two more valuable tools in the Block Editor, etc.

1. Excellent Performance

Higher performance plays an important role in GstarCAD. GstarCAD not only constantly provides users with more useful functions, but also delivers great performance in both 2D and 3D operations.

The performance of common-use operations like "OPEN", "QSAVE", "PLOT", "CLIP", "TRIM", "PASTE", "MOVE", "DYNAMIC SELECTION", and more commands are significantly faster than other CAD software. Big drawings could be opened more quickly and your work can be saved in only a fraction of a second.

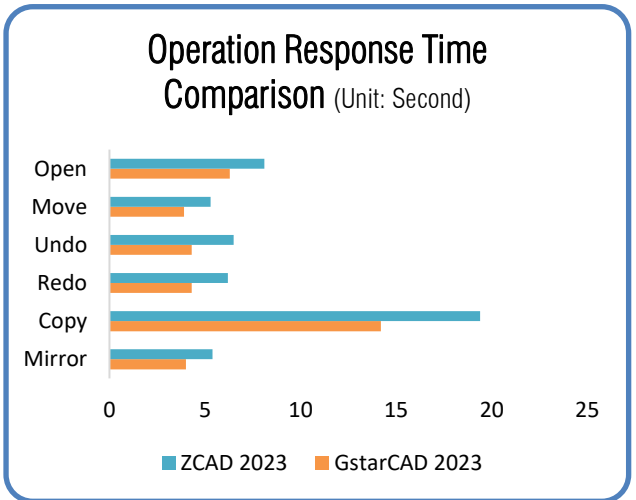
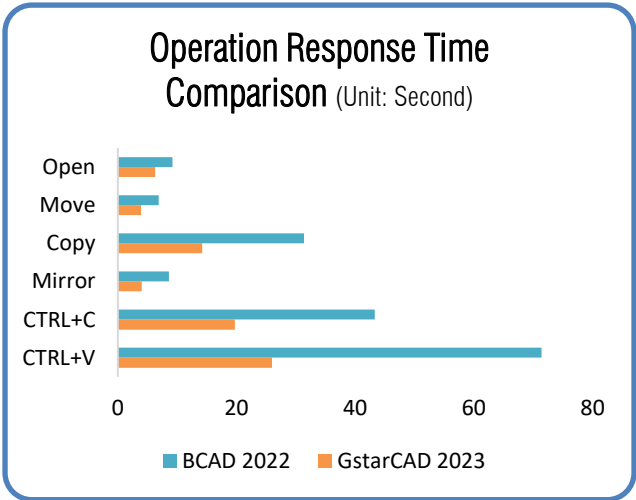
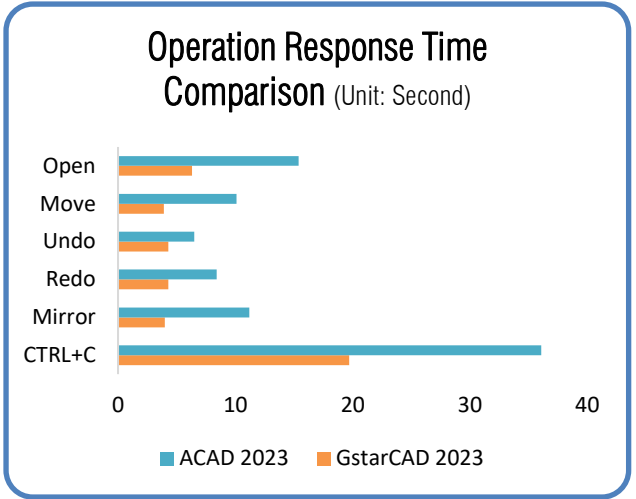
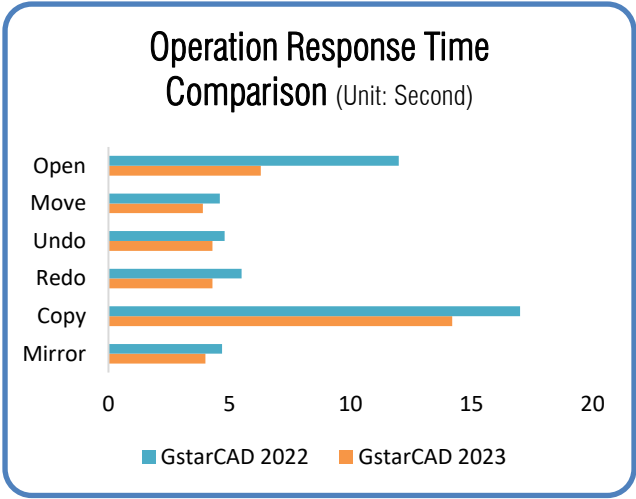
The chart below provides an overview of the performance of GstarCAD 2023. We build an operation speed comparison of the basic features between GstarCAD and another CAD. The drawing which used to test the operation time is around 47 MB. To make sure the data validation, same operations will be tested twice and get the average value.

Operation Time Comparison between GstarCAD 2023 and GstarCAD 2022 and other competitors: (Unit: Second)

Testing environment: WIN11 64bit; 16G storage; 64bit installation package; CPU: 12th Gen Intel(R) Core (TM) i5-12500 3.00 GHz;

Drawing size:

- We tested the OPEN command with more than 10,000 drawings ranging from 20KB to 475MB, and got the average OPEN time.
- We tested other operations with two 48MB and 114MB drawings, and got the average time.



It's obvious that GstarCAD 2023 is faster than the other CAD software when executing MOVE, UNDO, REDO, COPY, MIRROR, CTRL+C and CTRL+V commands. And it is extremely good when executing COPY TO CLIPBOARD command. Besides the chart, GstarCAD also works excellently in ARRAY and EXPLODE command, while another CAD couldn't even array objects in the same drawing. Additionally, executing EXPLODE with the other CAD software won't get response for a long time. Compared with other CAD software, GstarCAD is far ahead in performance especially for large drawings.

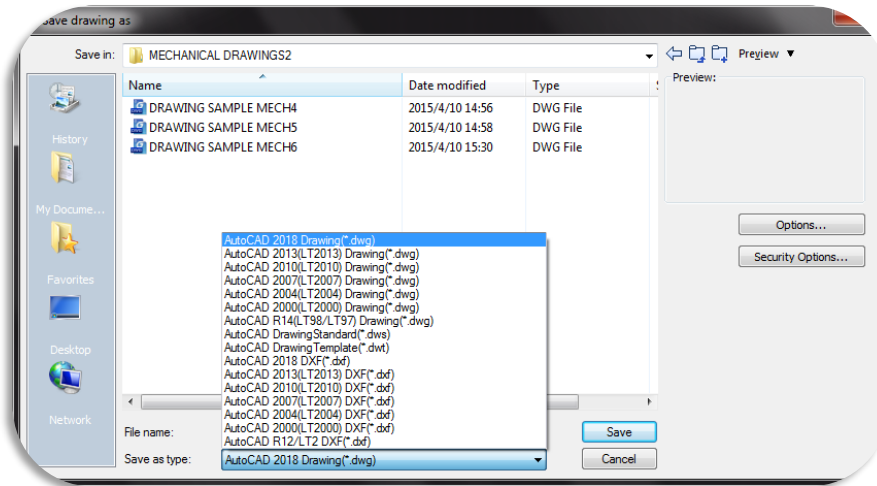
2. Perfect Compatibility

GstarCAD constantly improves its compatibility in all aspects and accomplishes the high compatibility with ACAD. The seamless data format, familiar interface, command structure and user operating habit, easy-to-use customization settings and applications/add-ons are all ready for you in GstarCAD 2023.

➤ **Data Format**

GstarCAD 2023 supports the native DWG/DXF file formats which are completely compatible with ACAD from version 2.5 to 2023. Any CAD drawings based on the DWG/DXF format can be easily handled by GstarCAD. Meanwhile, the drawing files created by GstarCAD also can be handled with other CAD software. GstarCAD 2023 fully realizes bidirectional compatibility with ACAD in data formats.

Furthermore, GstarCAD 2023 even supports various kinds of data file formats and application development interfaces. You could create or edit drawings in exactly original ways.



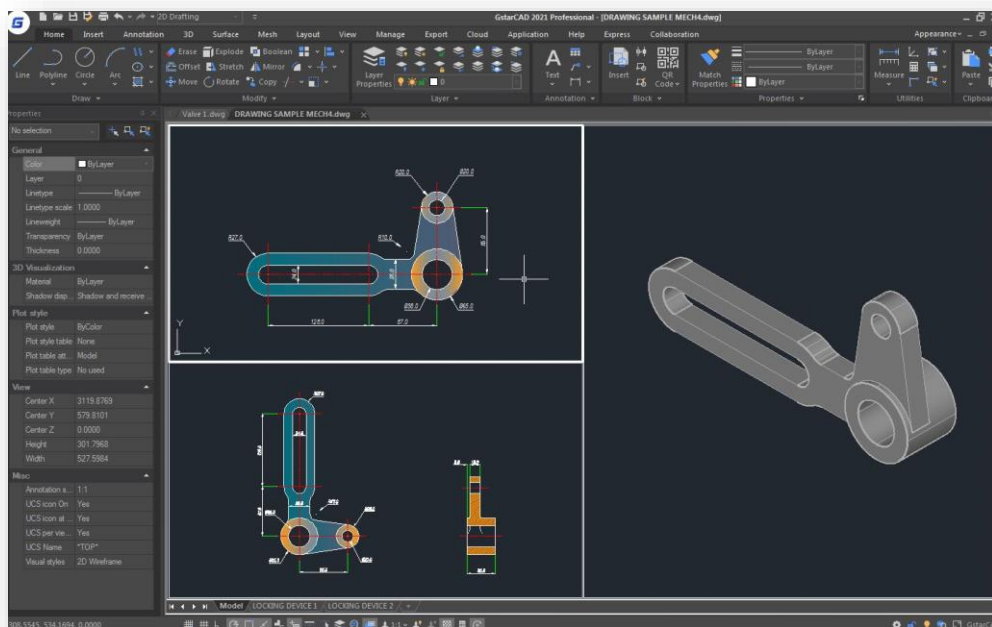
The main file formats and development interfaces between GstarCAD and ACAD.

Items	GstarCAD	ACAD
2.5-2018 DWG/DXF Versions	✓	✓
Drawing Template File (DWT)	✓	✓
Drawing standard File (DWS)	✓	✓
Customize User interface file (CUI/CUIX)	✓	✓
Old Menu File (MNU)	✓	✓
Drawing Sheet Set File (DST)	✓	✓
Hatch Pattern File (PAT)	✓	✓
Font File (SHX)	✓	✓
Line Type File (LIN)	✓	✓
Print Style File (CTB/STB)	✓	✓
Import and Export WMF	✓	✓
Import and Export SAT	✓	✓
Import 3DS	✓	✓
Import DGN	✓	✓

Export DWF/DWFX	✓	✓
Export STL	✓	✓
Export EMF	✓	✓
DWF Underlay	✓	✓
PDF Underlay	✓	✓
DGN Underlay	✓	✓
Script File (SCR)	✓	✓
LISP Development Interface	✓	✓
LSP File Loading	✓	✓
FAS File Loading	✓	✓
VLX File Loading	✓	✓
VBA Development Interface	✓	✓
Class ARX Development Interface	✓	✓
.net Development Interface	✓	✓

➤ Concise User Interface

GstarCAD 2023 offers you a concise and familiar interface. The combination of attractive dark color theme and icon designs will reduce your eyestrain. It's also available for you to display and rearrange elements like the toolbars, display the command bar, switch between workspaces, change the interface themes, customize your own interface and enable the status bar. The toolbars and command bar can also be floated anywhere on the screen or docked as well.



➤ **Familiar Command**

You can get started with GstarCAD immediately with the familiar command structure and shortcut system that you have known without any extra training. Whether you're a novice user or an experienced CAD professional, you'll soon be creating drawings using the productivity-enhancing features of GstarCAD.

GstarCAD Commands	ACAD Commands	GstarCAD Commands	ACAD Commands
Multiple	Multiple	Superhatch	Superhatch
Osnap	Osnap	Redraw	Redraw
Qselect	Qselect	Regen	Regen
Qleader	Qleader	Scalelistedit	Scalelistedit
Spell	Spell	Bedit	Bedit
Layerp	Layerp	Render	Render
Layoff	Layoff	Flatshot	Flatshot
		

➤ **Customized Settings**

GstarCAD offers several methods to import your customized settings such as CUI, Lisp program, Shortcut settings, Blocks, DWT, Tool palettes, Plotters and so on from other CAD software. In just a few minutes, you will find your familiar interface in GstarCAD.

➤ **API and Add-ons**

GstarCAD offers friendly development interface such as GRX, .NET, VBA, Lisp, etc. Nowadays, hundreds of professional applications and industrial solutions are running on GstarCAD.

For more information about applications/add-ons of GstarCAD, please refer to the link:

<https://www.gstarcad.net/application/>

3. Flexible Licensing

3.1. Licensing Policy

GstarCAD licensing policy is flexible and simple. We provide both perpetual license and subscription. You are free to choose the license mode and you decide when to upgrade.

Perpetual License

When you choose to buy GstarCAD Perpetual License, you have the right to use it perpetually. You buy it once and it's forever yours. You are not forced to buy the subscription or upgrades.

Perpetual License and Subscription Plans

You can buy GstarCAD Perpetual License together with Subscription Plans. Gstarsoft releases a new GstarCAD major version every year, with Subscription Plans you can upgrade to the latest version of GstarCAD.

Yearly Subscription

GstarCAD Yearly Subscription is similar to ACAD Subscription; you can just pay a smaller amount for GstarCAD 1-year-license.

GstarCAD Upgrades

Gstarsoft releases a new GstarCAD major version every year; you can upgrade your GstarCAD Perpetual License to any newer version, still the Perpetual License!

3.2. Licensing Options

GstarCAD not only provides the flexible licensing policy, but also provides the flexible licensing Options. GstarCAD offers Stand-alone and Network licenses, both are available with Soft key (Serial number) and Dongle (USB-key).

Stand-alone license

The software is constrained to a certain host. A license is needed for each computer on which the software will be installed.

Network license

A pool of licenses is available on the server, for use in any computer on the network. You only need to have licenses for the maximum number of simultaneous users expected, not for each computer where the software will be installed.

	Stand-alone		Network	
	License-key Serial number	USB-key Dongle	License-key Serial number	USB-key Dongle
Perpetual license	✓	✓	✓	✓
Rental license	✓	×	✓	×
License borrowing	×	×	✓	×
Connection to license server	×	×	✓	✓

4. Innovative Features

GstarCAD offers over 100 unique and innovation tools like “Collaboration”, “Area Table”, “Auto Layer”, “Viewport to Layout”, “Autoxstable”. They are adopted to significantly speed up your drafting.

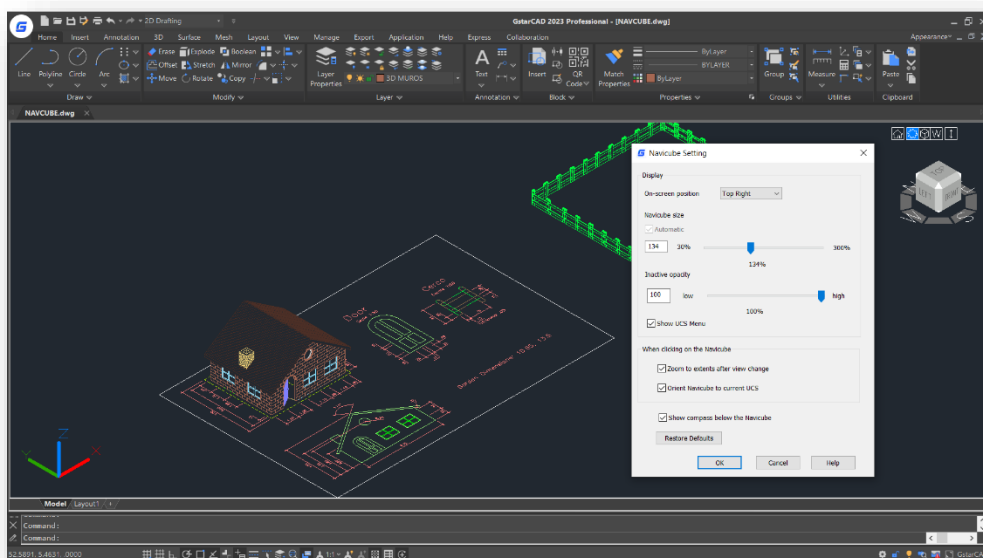
GstarCAD Innovative Features	Description
Autolayer	Automatically switch the current layer while drawing the graph and draws the graphic to the set layer.
Area Table	Automatically dimension and count the area of an enclosed object and export the result to a table in the current drawing area.
Break Object	Breaks Objects by intersecting lines and allows to set the gap.
Block Break	Breaks or shelter the graphic under the block.
Graphic Compare	Compares graphic of two groups of objects or two files.
Line2pl	Converts one or multiple connected straight line(s), arc(s) to one polyline.
Sptpl	Spline created can be converted to a polyline according to the accuracy (number of segments of the arc).
GstarCAD Tools	A set of GstarCAD practical tools to enhance design efficiency, Including Drawing Scale, Rotate Cursor, Draw Axonometric Line, Extension, Normal Connect, etc.
Drawing Lock	Turns the drawing into a whole block to prevent be modified by others.
Attribute Increment	Specifies attribute of blocks with incremental value, and to modify attribute value of blocks according to the sort method.
Define Layout Viewport from Model Space (M2LVPORT)	Defines the range of drawing displayed in viewport from the model space, calculate the viewport size based on the set scale and position the viewport in the layout space.
Align Tool	Aligns selected objects such as: rectangle, circle, line, spline, arc, pline, block and even 3D model object along X or Y axis coordinates.
Arrange Tool	Adjusts the arrangement of multiple objects. It can align multiple objects at left, right, top, bottom and center and also can arrange vertical or laterally.
MEASUREGEOM	Supports to measure distance, radius, angle, area, volume sum area and so on.
Symmetric Draw	Generates the symmetrical object automatically when drawing an object.
Outline Objects	Extracts the outline shape of selected closed objects in a window selection method.
Invert Fillet	The FILLET command now offers a new option called Invert. You can create a reverse fillet by this option.
Magnifier	Views a specific area of your drawing as a magnifier with the capability of snap points without performing zoom in/out.
Barcode & QR Code	Creates Barcode & QR Code by entering data or picking data from drawing.
Shortcut Customization(CUSTACC)	CUSTACC command allows you to customize, delete or modify existing command shortcuts.
Table Tools	A set of practical tools to draw and edit tables and can export CAD Table to Excel

	file.
AutoXLSTable	Opens Excel file to edit the data and insert it to GstarCAD. It also allows updating the table data after the drawing was modified.
Pline Boolean	Supports different Boolean operation options such as union, intersection and subtraction.
Batch Print	Batch print drawings with the same drawing frame attribute in a drawing.
Arrange Frame	Inserts frames of drawings, calculates according to the size of the frame and then arranges them to a big drawing.
GstarCAD Collaboration	Helps to improve project design efficiency and significantly reduce error and cost.
...	...

5. What's New in GstarCAD 2023

5.1. NAVICUBE *New*

The NaviCube is a navigation tool that is displayed when you are working in 2D model space or 3D visual style, which allows switching between standard and isometric views more easily. It consists of a cube, compass and options, which is draggable and clickable, and supports switching to any available preset views, rolling the current view, or setting the current view as the Home view.

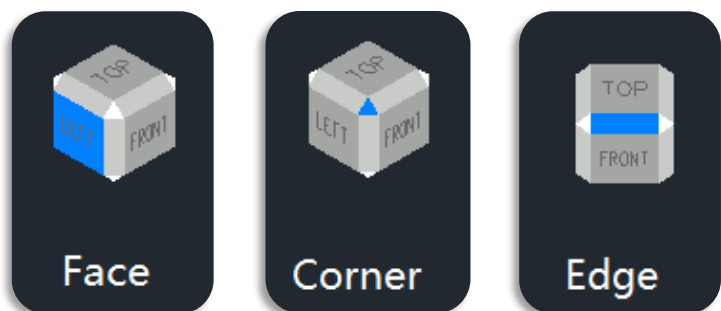


You can enter the NAVICUBE command, or click Ribbon > View > 3D Tool > NaviCube to control whether to display the NaviCube in the drawing area. When the value is ON, the NaviCube is displayed, when the value is OFF, the NaviCube disappears.

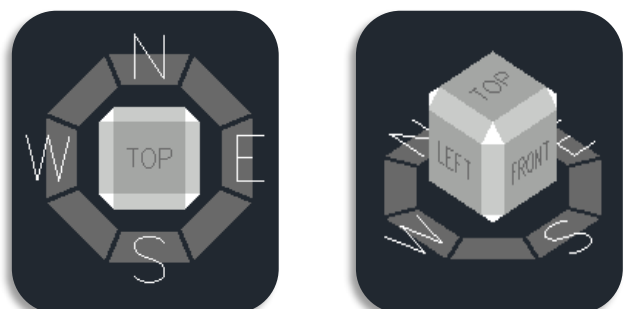
Appearance of the NaviCube: The NaviCube is displayed in one of two states: inactive and active. When your cursor is not touching the NaviCube, it's inactive, it appears partially transparent by default so that it does not obscure the view of the model. When you move the cursor over it, it becomes active, it is opaque, so the view of the objects in the current view of the model may be obscured. And you can modify other properties of the NaviCube within the Settings option.



Cube: It is in the top right corner of the drawing area over the model, and shows the current viewpoint of the model. When moving the cursor over it, you are able to click the faces, corners or edges to change the views conveniently, as well as click on the cube and drag it to roll the current view.

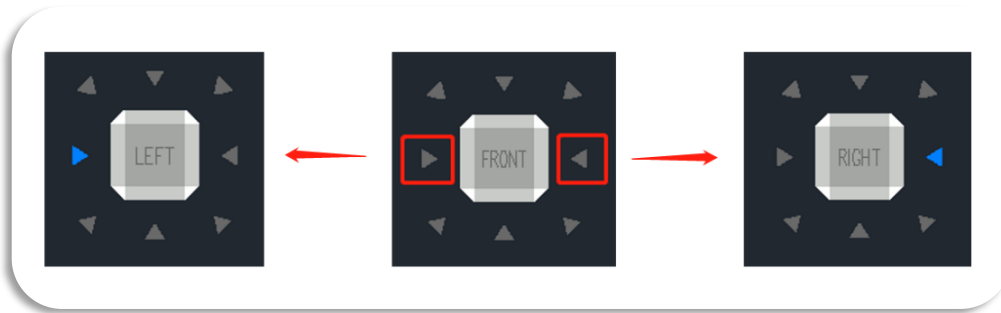


Compass: The compass is displayed below the NaviCube and indicates the north direction defined for the model. You can click any of the direction letter on the compass to rotate the model.

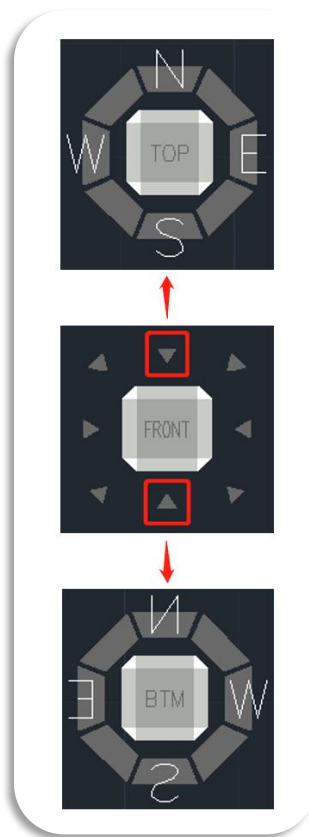


When the view is "Front" "Back" "Left" or "Right", some little **triangle buttons** are displayed around the cube, which allow you to switch between adjacent views by clicking them.

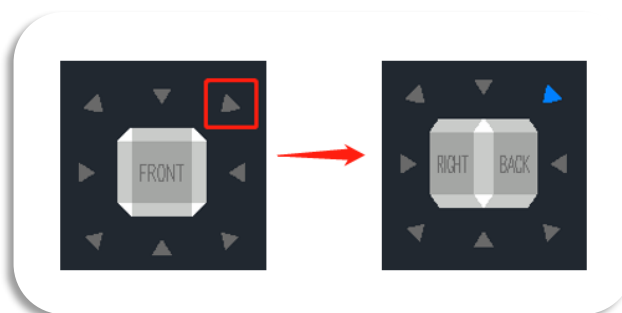
- When clicking the triangle button at the right or left side, the view is switched to its right or left adjacent view. Therefore, you can continuously switch between different views and rotate the navigation cube horizontally by clicking these two buttons.



- When clicking the triangle button at the top or bottom side, the view is switched to top or bottom view. The top and bottom triangle buttons can only be clicked once.



- When clicking the triangle button at corners, the view is switched to the edge view of two adjacent views. The corner triangle buttons can only be clicked once.

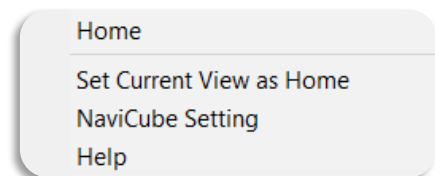


Options Menu:

- Home: Changes to Home view
- NaviCube Settings: Opens NaviCube Setting window
 - On-screen: Identifies the view in the viewport where the NaviCube is displayed.
 - Navicube size: Specifies the size of the NaviCube.
 - Inactive Opacity: Controls the opacity of the NaviCube when inactive.
 - Show UCS Menu: Controls the display of the UCS drop-down menu.
 - Zooms to extents after view change: Specifies if the model is forced to fit the current viewport after a view change.
 - Orient Navicube to current UCS: Controls whether the NaviCube reflects the current USC or WCS.
 - Show compass below the Navicube: Controls the whether the compass is displayed below the NaviCube tool.
 - Restore Default: Restore NaviCube settings to default values.
- 3D views: Displays view control list.
- Coordinated system: Controls coordinate system.
- Upside down: Changes to the view side which is parallel to the current view side.
- 90° Clockwise: Rotates 90 degrees clockwise.
- 90° Counter Clockwise: Rotates 90 degrees counterclockwise.

Right-click Menu:

- Home: Goes back to Home view
- Set Current View as Home: Specifies the current view as the Home view.
- NaviCube Settings: Opens the NaviCube Setting window.
- Help: Open Online Help system, Home – Commands – N – NAVICUBE command.



System Variable	Description	Value	Value Description
COMPASS	Controls whether the compass is on or off in the current viewport	0	Turn OFF compass
		1	Turn ON compass
NAVCUBEDISPLAY	Controls the display of the NaviCube in the current visual style and the current viewport	0	NaviCube is not displayed in 2D and 3D visual styles
		1	NaviCube is displayed in 3D visual styles, but not in 2D visual styles
		2	NaviCube is displayed in 2D visual styles
		3	NaviCube is displayed in both 2D and 3D visual styles
NAVCUBELOCATION	Identifies the corner in the viewport where the NaviCube is displayed	0	Upper-right
		1	Upper-left
		2	Lower-left
		3	Lower-right
NAVCUBESIZE	Specifies the size of the NaviCube	30-300	The bigger the number, the bigger the NaviCube
NAVCUBEOPACITY	Controls the opacity of the NaviCube when inactive	0%-100%	0% identifies transparent NaviCube, 100% identifies fully opaque NaviCube
NAVCUBEORIENT	Controls whether the NaviCube reflects the current USC or WCS	0	NaviCube is oriented to reflect WCS
		1	NaviCube is oriented to reflect the current UCS
NAVCUBECUBEFONTSIZE	Controls the font size of the text on the cube	1	Small
		2	Medium
		3	Large
NAVCUBECUBEPRISMWIDTH	Control the width of cube edges and corners	1	Thin
		2	Medium
		3	Wide

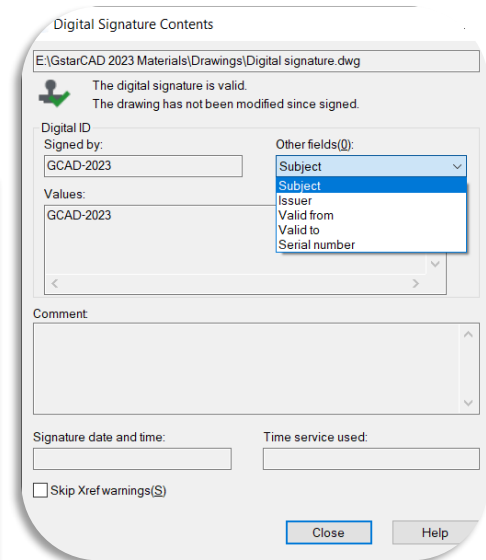
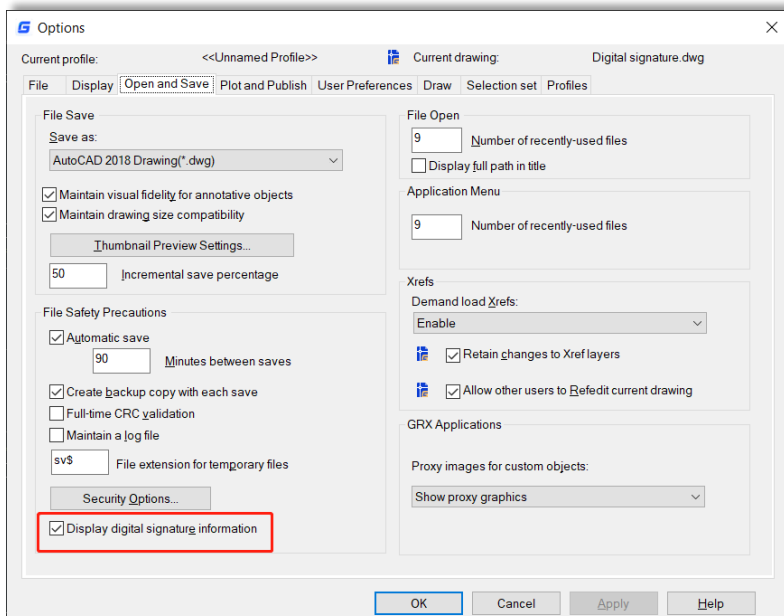
Note: The color of the cube can be changed at Logo ► Options ► Display ► Windows Elements ► Colors.

5.2. Digital Signature *New*

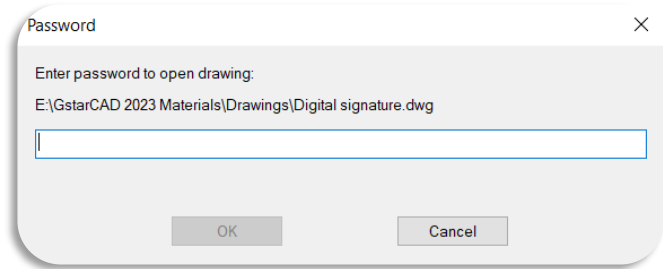
DIGITALSIGN and SIGVALIDATE commands are provided to support attaching and validating digital signatures, which can offer reliable information, and validate the authenticity and integrity of drawings.

System Variable	Description	Value	Value Description
SIGWARN	Controls whether the Digital Signature Contents dialog box is presented when a file with a valid digital signature is open	0	The information is not presented if a file has a valid signature
		1	The information is presented if a file has a valid signature

Display digital signature information: Located at Logo ► Options ► Open and Save ► File Safety Precautions ► Display digital signature information, has the same effect as the SIGWARN system variable.

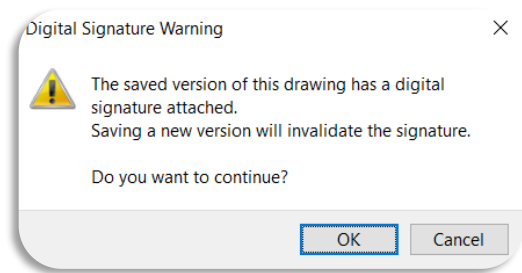


If your digital signature has a password, you will need to enter the password first.



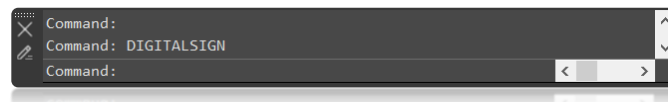
Note: The digital signature will become invalid when:

- The file is modified after the digital signature is attached.
- The file is damaged during transmission or when a digital signature is attached.
- The digital certificate has been revoked by its certificate authority.



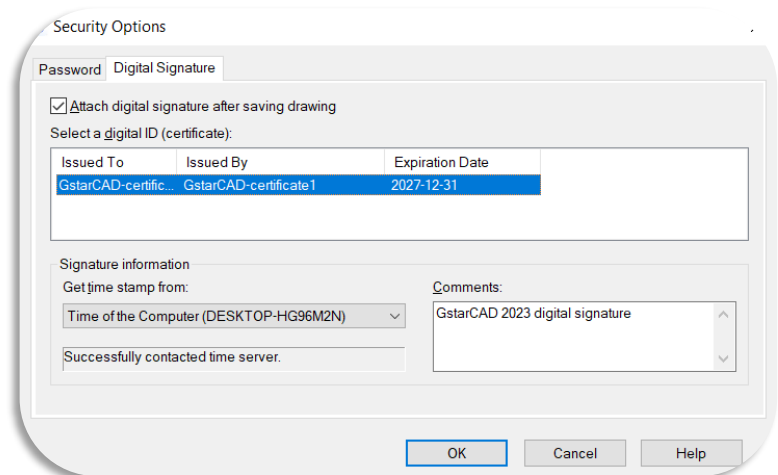
5.2.1. DIGITALSIGN

You can enter DIGITALSIGN command to attach a digital signature to a drawing, which can provide reliable information of the origin, identity and status on a drawing file. And if an unauthorized change is made or the signed file is corrupted, the digital signature becomes invalid.

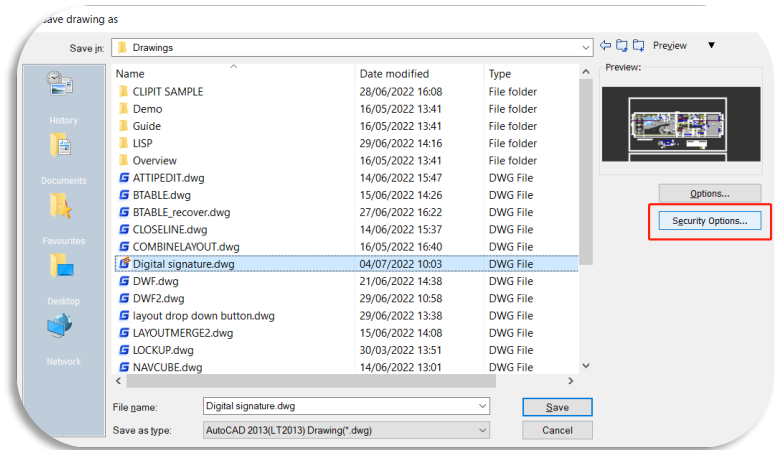


After executing the DIGITALSIGN command, the Security Options window will pop up, after checking the 'Attach digital signature after saving drawing' option, you are able to select a digital ID and edit signature information (Time stamp and Comments).

But, if there is no valid digital certificate in your PC, a warning box will pop up.



Except the DIGITALSIGN command, you can also enter 'SAVEAS' command, or click Logo ► Save as ► Security Options, to open the 'Save drawing as' dialog box and attach a digital signature to the drawing. The Security Options window that is popped up is the same as DIGITALSIGN command.



Note: You can only digitally sign the following file types:

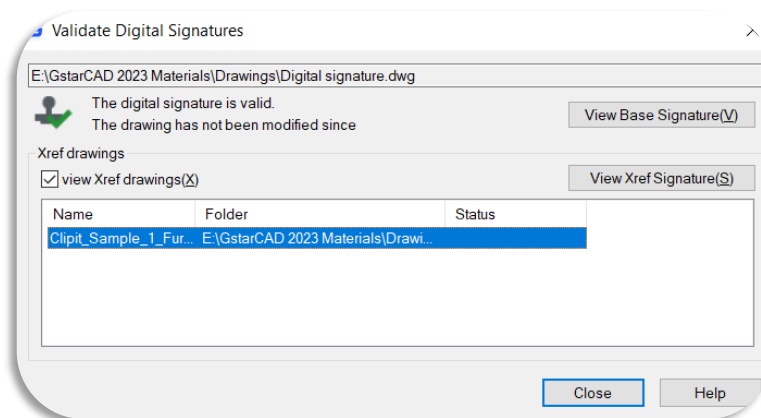
- DWG and DWT files that are compatible with AutoCAD 2000 and later drawing-file formats.
- DWS files.

5.2.2. SIGVALIDATE

You can click the signature validate icon in the Status bar or enter the SIGVALIDATE command to check whether the digital signature attached to a drawing file is valid or invalid. The Validate Digital Signatures dialog box that shows information about the digital signature is displayed.



After executing the SIGVALIDATE command, the Validate Digital Signature dialog box pops up. When it is valid:



Name: Displays the location and name of the file whose digital signature is being viewed.

Digital Signature Status: Displays a Valid Signature icon if a digital signature is valid, and an Invalid Signature icon if the digital signature is not valid.

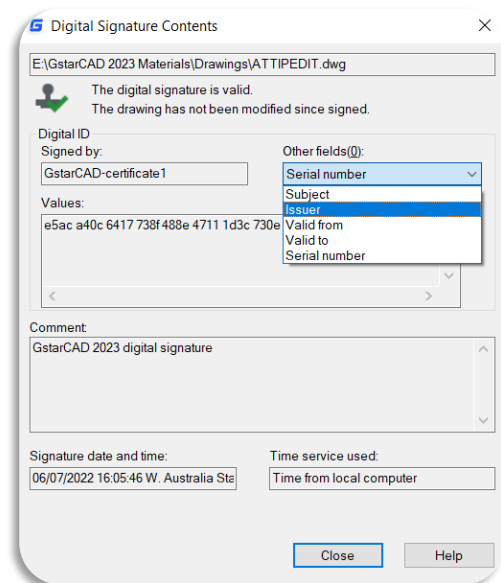
View Base Signature: Displays the Digital Signature Contents dialog box. The option is available only if the digital signature is valid.

View Xref drawings: Displays the Xref drawings contained in a file's base drawing. After checking it, a list of Xref drawings will be shown below as long as there are some Xref drawings contained in the current signed file.

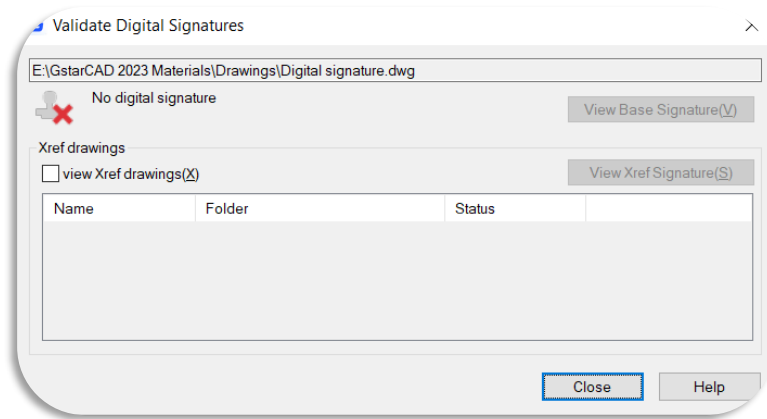
View Xref Signature: Displays the Digital Signature Contents dialog box of the Xref file. It can be clicked only when the Xref file is selected in the list.

The Digital Signature Contents dialog box includes;

- Name: Displays the location and name of the file whose digital signature is being viewed.
- Digital Signature Status: Displays a Valid Signature icon if a digital signature is valid, and an Invalid Signature icon if the digital signature is not valid.
- Signed by: Displays the location and name of the file whose digital signature is being viewed.
- Other fields: Displays the subject, issuer, valid from date, valid to date and serial number in the Values box.
 - Subject: Displays information about the organization or individual who owns the digital ID and attached the digital signature.
 - Issuer: Displays the name of the certificate authority that originally issued the digital ID.
 - Valid from: Displays a day, month, year, and exact time, the digital ID is valid from that time.
 - Valid to: Displays a day, month, year, and exact time, the digital ID will be invalid after that time.
 - Serial number: Displays the serial number assigned to the digital ID.
- Values: Displays information about a digital signature based on the item you select in the 'Other fields' drop-down list.
- Comment: Displays comments about the digital signature that is attached to the current file.
- Signature date and time: Displays the date and time that the digital signature was attached to the current file. The date and time are based on the time service used when the signature was attached.
- Time service used: Displays the time service used to add the time stamp to the current file.
- Close: Closes the dialog box.
- Help: Opens Online Help system, Home – Commands – S – SIGVALIDATE command.

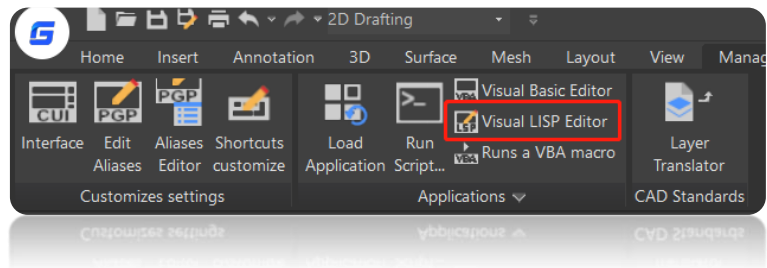


When the drawing file is not signed:



5.3. Lisp Debugger *New*

You can enter the VLISP or VLIDE command, or click Ribbon ► Manage ► Applications ► Visual LISP Editor to launch the Visual Studio Code as the Lisp Debugger in GstarCAD 2023, in which you are able to edit and debug Lisp programs conveniently.

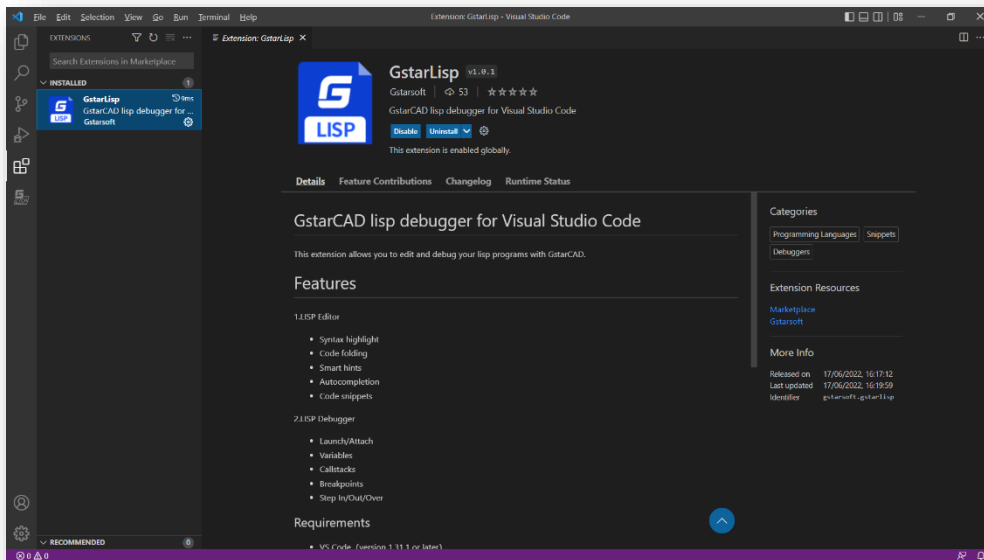


If you haven't installed the Visual Studio Code software, a warning will pop up, asking you to install it first.

If the Visual Studio Code software has been installed in your PC, it will be opened in a few seconds. You can visit VS Code official website (<https://code.visualstudio.com/docs/getstarted/userinterface>) to learn more details.

GstarLisp:

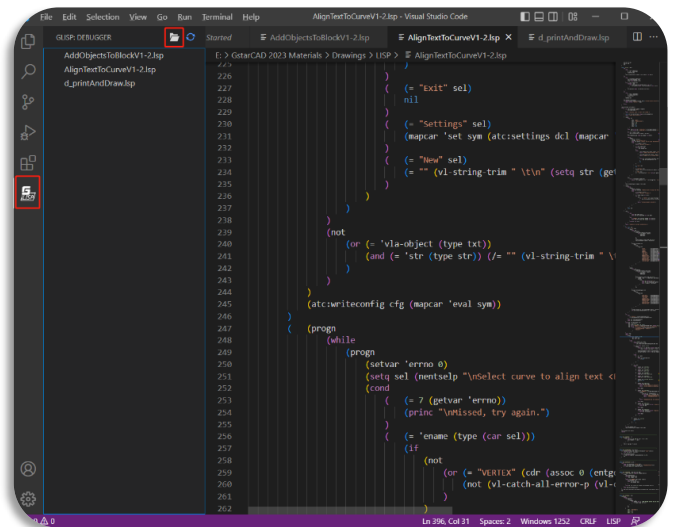
This extension adds support for Lisp files to Visual Studio Code. It allows you to edit and debug your lisp programs with GstarCAD. When you start VS Code through GstarCAD, it will install the GstarLisp extension for you by default. And when there is a new version of the GstarLisp extension, it will be updated automatically the next time you start VS Code through GstarCAD. Alternatively, you can also search and install it in marketplace.



5.3.1. Open File

You are able to open LSP files or DCL files and debug them when the VS Code is opened and GstarLisp extension is installed.

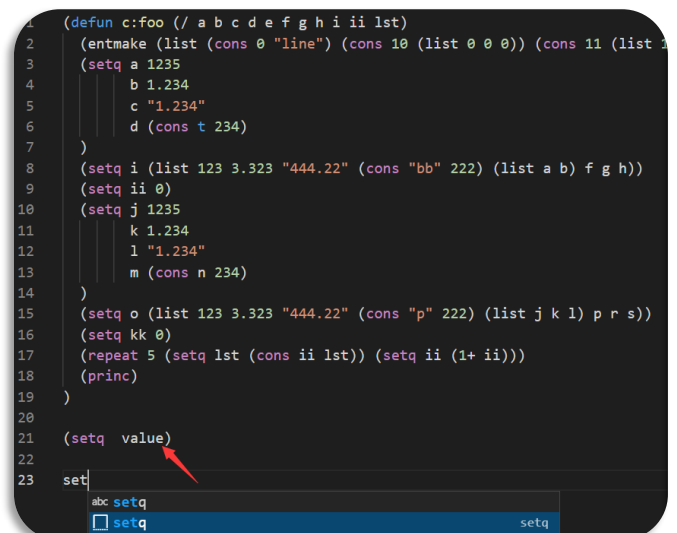
- Click the GstarLisp extension icon, then click "Open Folder" icon, select the folder, and the .lsp and .dcl files will be filtered out.
- Click the file in the list to open it in the editing area.
- Click the refresh button to reload the selected file if you need.



5.3.2. Edit File

What you can do to edit the program with GstarLisp extension in VS Code:

- Syntax highlight
- Code folding
- Smart hints
- Autocompletion
- Code snippets



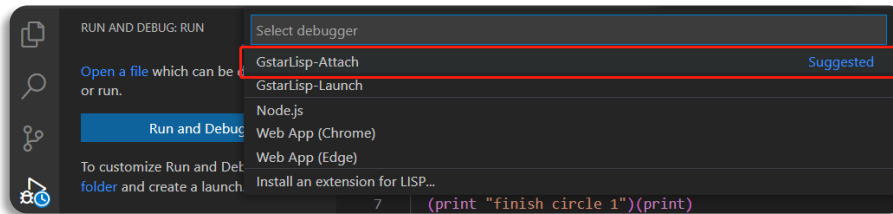
5.3.3. Debug

Basic debugging steps include:

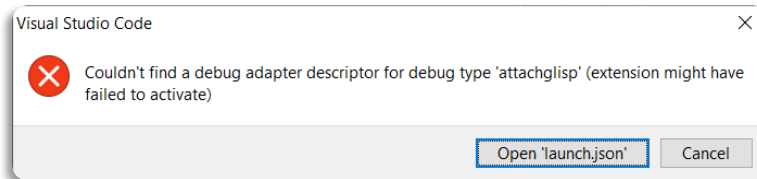
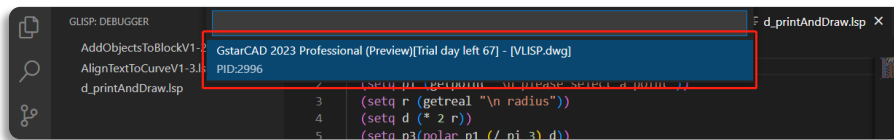
- Step 1. Launch VS Code
- Step 2. Open a LSP file or a DCL file
- Step 3. Add debug configurations and edit launch.json
- Step 4. Choose a debug configuration: GstarLisp-Launch or GstarLisp-Attach
- Step 5. Click Run > Start Debugging (or Press F5)

GstarLisp-Attach:

Allows you to attach to a running instance of the GstarCAD application to debug the current LSP or DCL file.

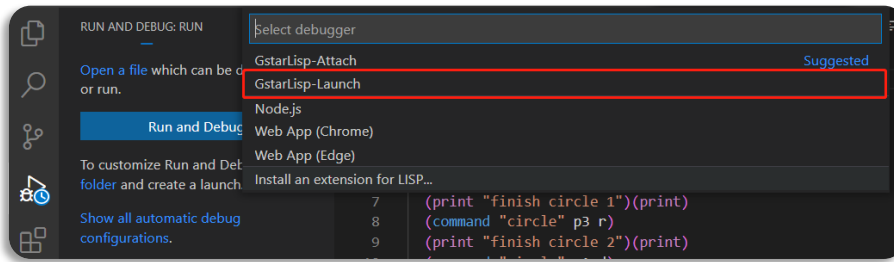


As long as you choose GstarLisp-Attach configuration, you need to select a running GstarCAD instance as debug adapter. If there is no running GstarCAD instance in your PC, a warning will pop up, and the file can't be debugged.

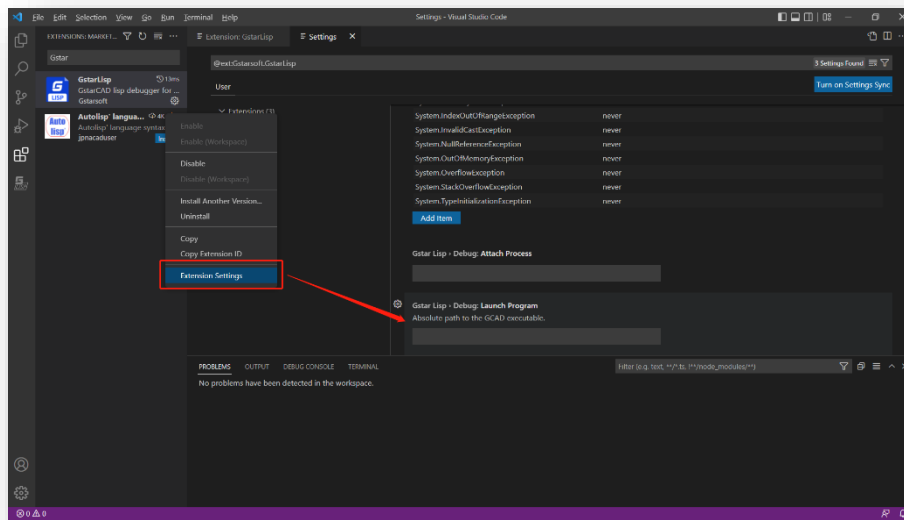


GstarLisp-Launch:

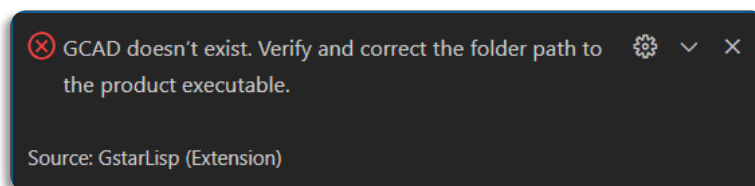
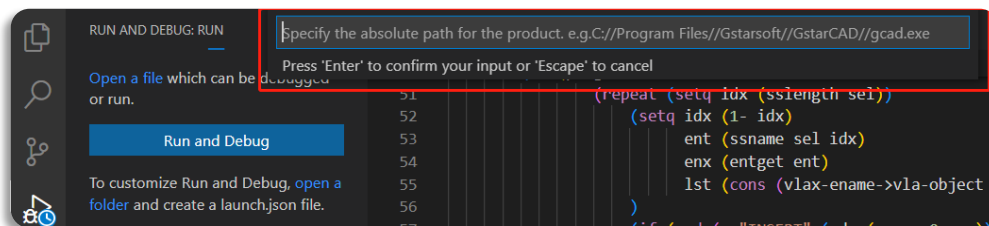
Launches a new process of the GstarCAD application to debug the current LSP or DCL file.



As long as you choose the GstarLisp-Launch configuration, you need to specify the absolute path of the gcad.exe file in the extension settings of the GstarLisp extension (path format C://Program files//Gstarsoft//GstarCAD2023//gcad.exe)



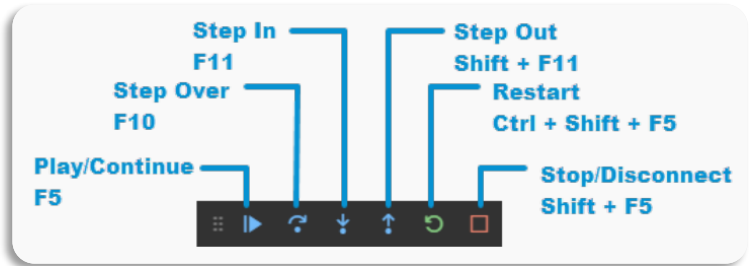
If you haven't set an absolute path to the gcad.exe file, the debug window will prompt you to set the path.



5.3.4. Debug Actions

Once a debug session starts, the Debug toolbar will appear on the top of the editor.

- Continue / Pause: Jumps to next breakpoint.
- Step Over: Completes current line and moves to the next line of code in the current function.
- Step Into: Completes the next line of code. If this line contains a function, go to the first line of the function's code and stop.
- Step Out: Completes all the code in the current function and return you to the previous function that "called" this function.
- Restart: Restarts the debug session.
- Stop: Stops the debug session.



Note:

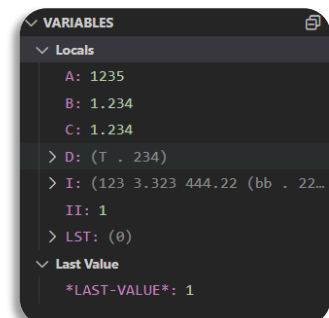
- In GstarLisp, press F10 to complete current line and move to the next line of code, while in AutoLisp, press F10 to complete current line, and then press F10 to move to the next line.
- When you click the **Restart** icon:
 - GstarLisp-Attach configuration: Current debugging session will not be stopped, and the debugging will be restarted in the current CAD instance.
 - GstarLisp-Launch configuration: Stops the current debugging session, ends the current CAD instance (without asking whether to save the drawing), and then re-launches a new CAD instance for debugging.
- When you click the **Stop** icon:
 - GstarLisp-Attach configuration: Stops debugging session, but keeps current CAD instance.
 - GstarLisp-Launch configuration: Stops debugging session, ends the current CAD instance (without asking whether to save the drawing).

5.3.5. Run View

Once a debug session starts, the Run View windows will appear on the left of the editor, including:

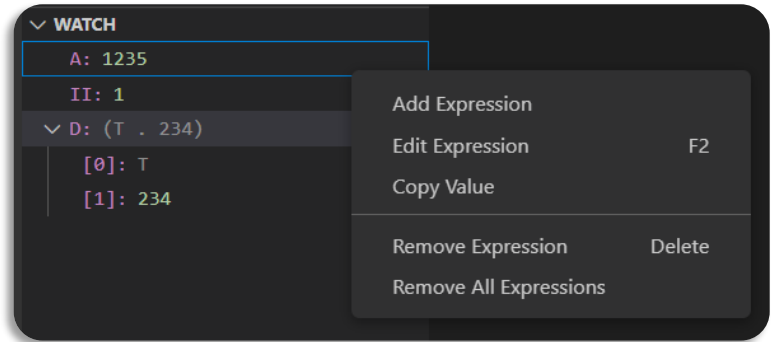
VARIABLES:

The Locals and Last Value windows show variable values while you are debugging. The windows are only available during a debugging session. The Locals window shows variables defined in the local scope, which is usually the current function or method. The Last Value displays the value of the last changed variable.



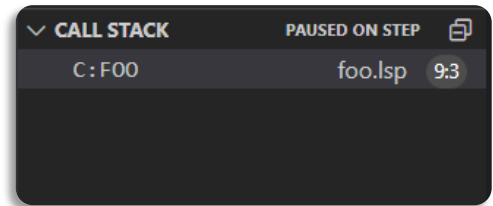
WATCH:

While you're debugging, you can use Watch windows to watch variables and expressions. The windows are only available during a debugging session. Watch windows can display several variables at a time while debugging. You are able to add, edit or remove expressions by right clicking on the Watch windows.



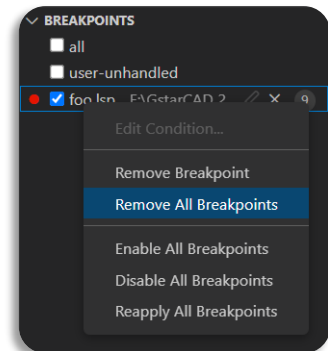
CALL STACK:

The Call Stack windows display a list of all the procedures that have been executed. It lists the name of the function or procedure that is currently on the stack. In GstarLisp, the call stack mainly displays the name of the called function.



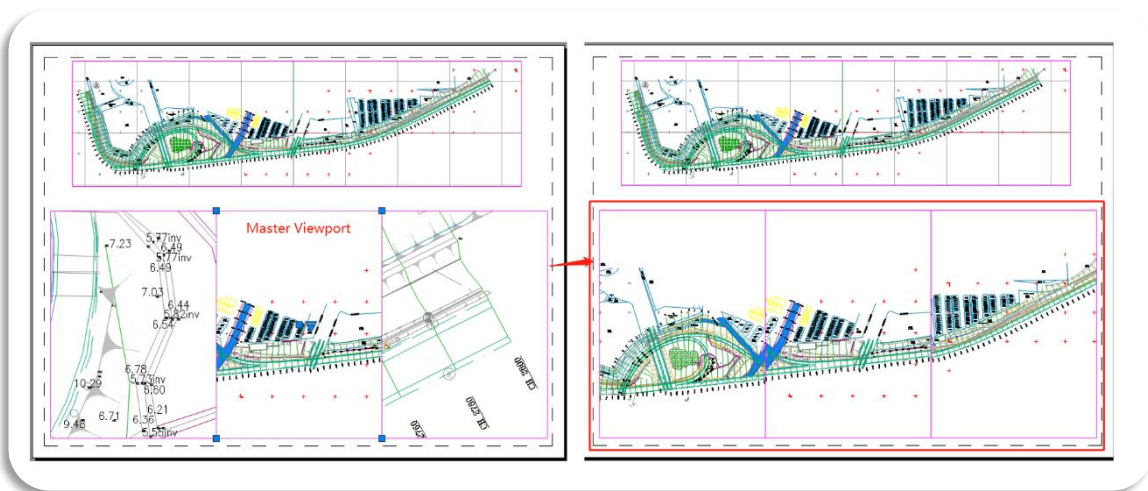
BREAKPOINTS:

A breakpoint is a setting that you can add to a line of code to temporarily pause the execution at that line. Breakpoints can be toggled by clicking on the editor margin or using F9 on the current line. The Breakpoints windows allow you to control all breakpoints.



5.4. VPSYNC New

You can enter VPSYNC command or click Ribbon > Express > Layout > Synchronize Viewports to synchronize one or more layout viewports to a master layout viewport to have the exact locations match up.



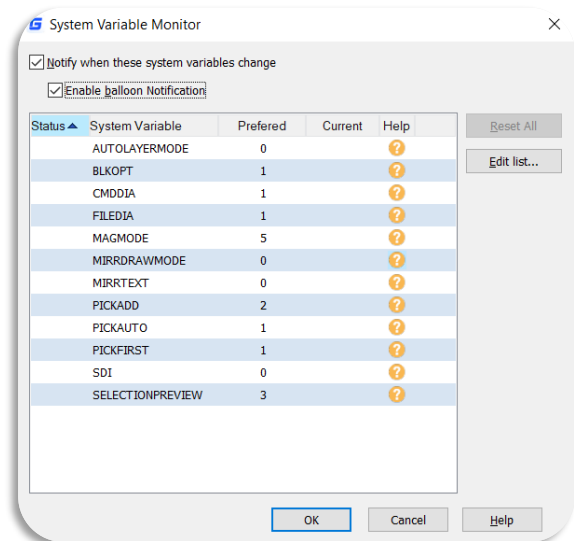
All synchronized viewports use the zoom factor of the master viewport.

```

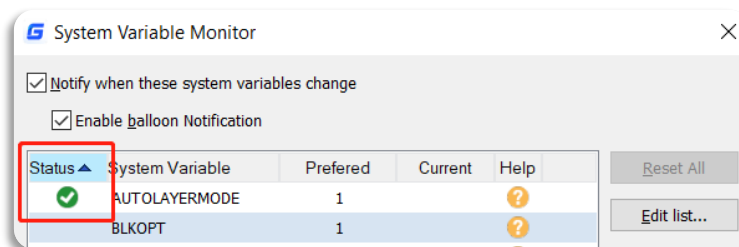
Command: VPSYNC
Select master viewport:
Select viewports to be aligned to master viewport: 1 found
Select viewports to be aligned to master viewport: 1 found, 2 total
Select viewports to be aligned to master viewport:
Paper space = Model space
1 = 307790.8
Current zoom factor = 0xp
Paper space = Model space
1 = 307790.8
Current zoom factor = 0xp
Command: VPSYNC
Select master viewport:*Cancel*
Command:
    
```

5.5. SYSVARMONITOR *New*

You can enter SYSVARMONITOR command to open the System Variable Monitor dialog box, which can monitor a list of system variables and send notifications when any one of them changes. There are already some system variables in the monitor by default.






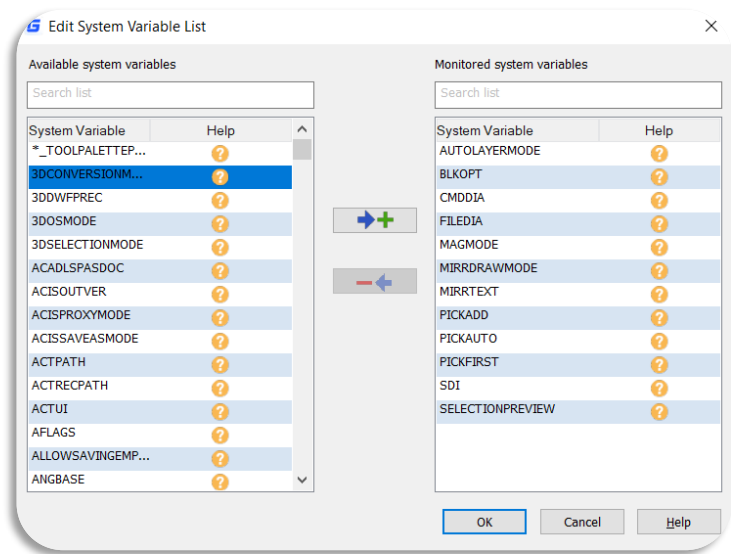
- Notify when these system variables change: Displays a command line and status bar notification when monitored system variables do not match their preferred value. (SYSMON system variable = 1)
- Enable balloon Notification: Displays a balloon alert notification when monitored system variables do not match their preferred value. (SYSMON system variable = 2)
- Reset All: Enabled whenever a monitored system variable does not match the preferred value. When selected, it will queue up system variables to be reset and reset them when you click OK.



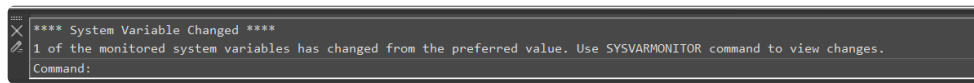
- Edit list...: Opens the Edit System Variable List dialog box where you can add or remove system variables to be monitored.
- OK button: Closes the System Variable Monitor dialog box and applies any system variable changes marked by Reset All.
- Help button: Opens Online Help system, Home – Commands – S – SYSVARMONITOR command.

After clicking the 'Edit list...' button, you are able to add or remove system variables in the "Edit System Variable List" dialog box.

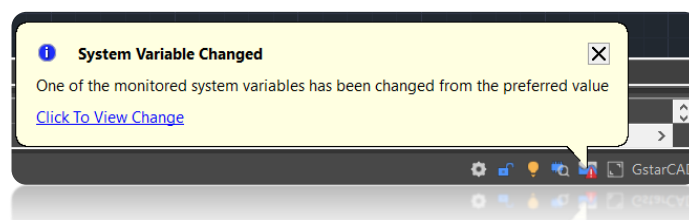
- Available system variables: Lists the system variables that are not monitored.
- Monitored system variables: Lists the system variables that are monitored.
- Filter Search box: Types a specified string to quickly find system variables.
-  : Adds the selected available system variables into the monitored system variable list.
-  : Removes the selected monitored system variables from the monitored system variable list.
-  : Opens Online Help system
- OK button: Closes the Edit System Variable List dialog box and applies all system variable changes.
- Help button: Opens Online Help system, Home – Commands – S – SYSVARMONITOR command.



When any system variable in the list is changed, there will be a warning in the command line:

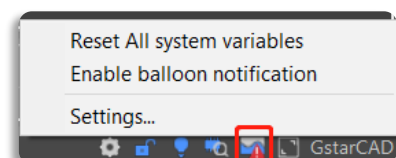


And if you check the 'Enable balloon Notification' option (SYSMON = 2), a balloon notification will pop up:



Right click the system variable monitor icon in the status bar:

- Reset All System Variable: Resets current value as the default value of the system variables that do not match their preferred value.
- Enable balloon notification: Displays a balloon alert notification when monitored system variables do not match their preferred value.

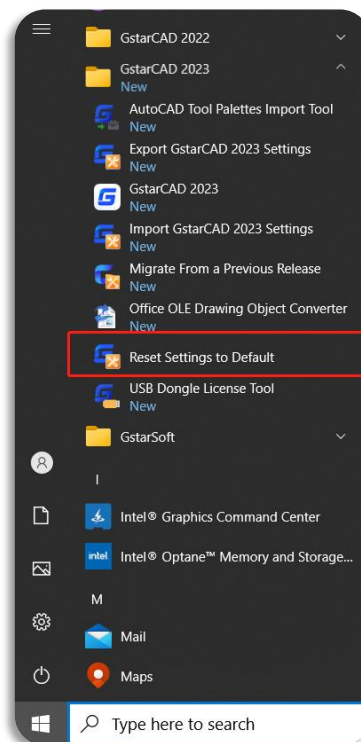


- Setting: Opens the System Variable Monitor dialog box.

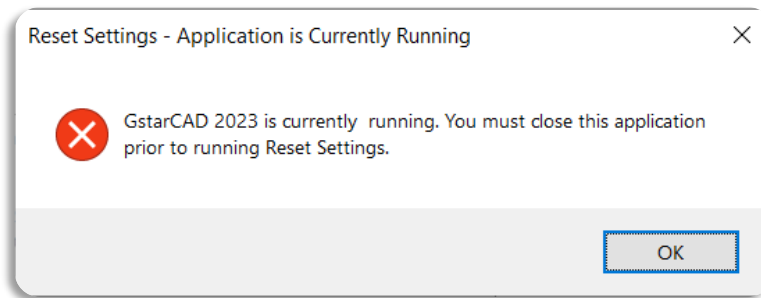
System Variable	Description	Value	Value Description
SYSMON	Controls whether the defined system variable list is monitored.	0	System variables are not monitored.
		1	System variables are monitored. Notifications are displayed on the command line and status bar.
		2	System variables are monitored. Notifications are displayed on the command line and status bar, as well as Balloon notifications.

5.6. Reset Settings to Default *New*

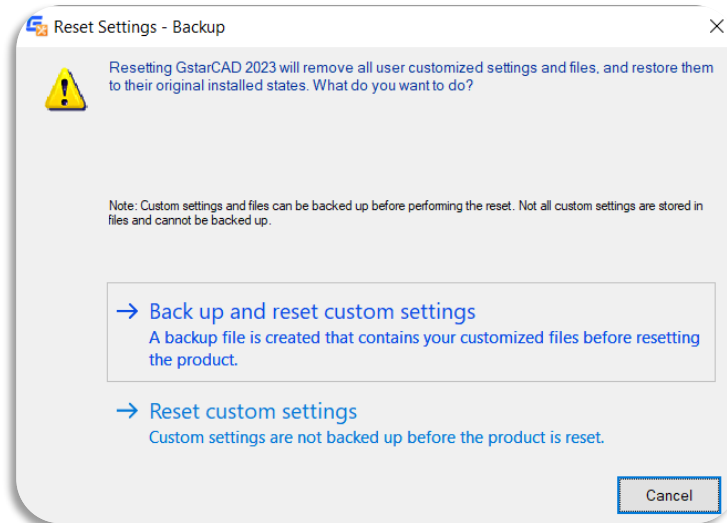
From GstarCAD 2023, you are able to reset GstarCAD settings to default by clicking Windows Start menu ➤ GstarCAD 2023 ➤ Reset Settings to Default.



You can only reset the settings when the software is closed. If the GstarCAD software is running, a warning will pop up:



If the software is closed, the Reset Settings dialog box will pop up, you can select 'Back up and reset custom settings' option to create a backup file that contains your customized files before resetting the product. Alternatively, you can select 'Reset custom settings' option to reset the product without creating backup files of your custom settings.



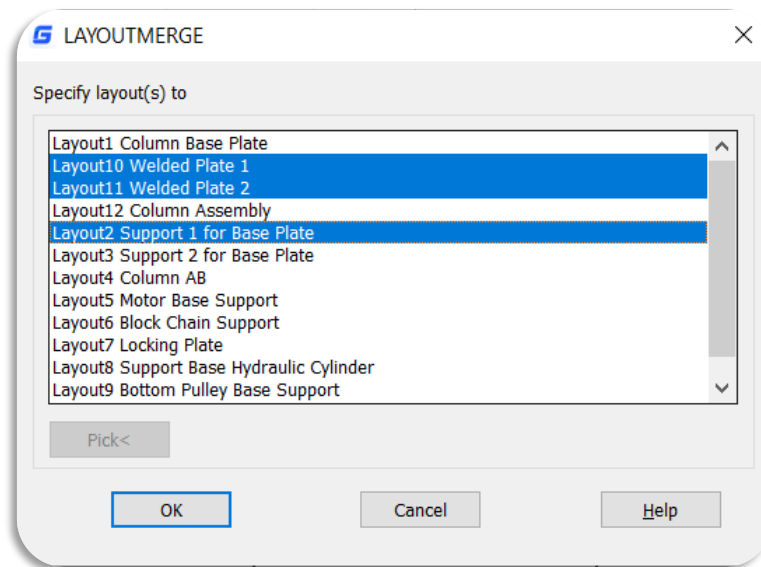
Note:

- Resetting the custom settings actually is cleaning up the registry information of GstarCAD software and deleting the Local folder and Roaming folder. After starting GstarCAD again, the new Local and Roaming folder will be regenerated.
- Backing up and resetting the custom settings actually is cleaning up the registry information of GstarCAD software and backing up the Local folder and Roaming folder under C:\Users\username\AppData, and then deleting the Local folder and Roaming folder. After starting GstarCAD again, the new Local and Roaming folder will be regenerated.

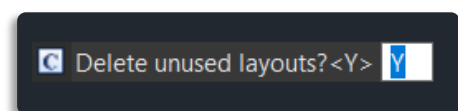
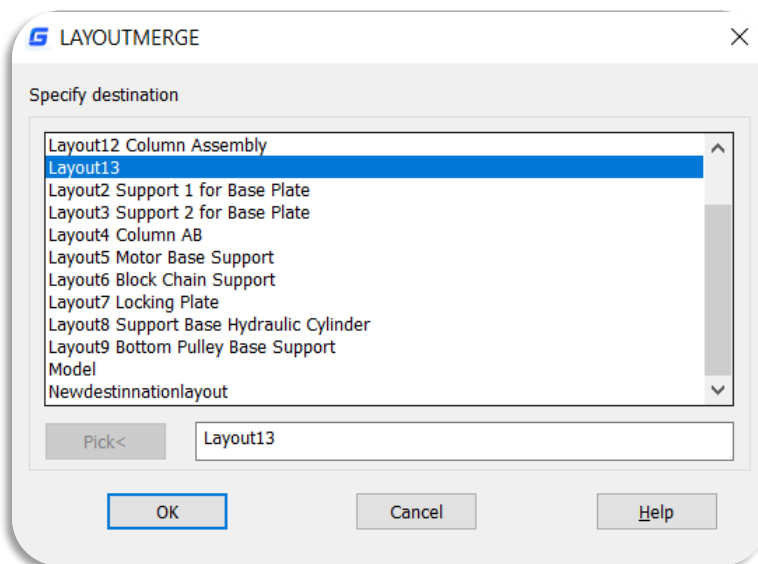
5.7. LAYOUTMERGE *New*

You can enter the LAYOUTMERGE command or click Ribbon ➤ Express ➤ Layout ➤ Merge Layout, to merge specific layouts into a single layout. All layouts or model are available to be picked, and you can specify an existing layout or enter a new name to create a new layout as the destination layout.

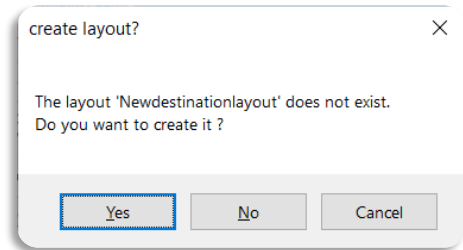
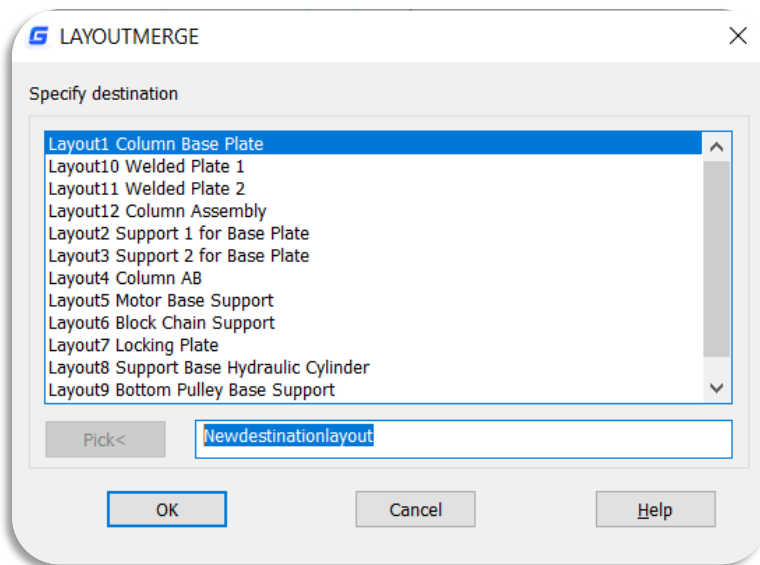
After enabling the command, the LAYOUTMERGE dialog box pops up, you can select any layouts or model in the list as the source layouts to be merged:



After clicking OK button, you are supposed to specify the destination layout into which to merge them, or enter a name for a new layout. If you specify an existing layout as the destination layout, and enter Y in the 'Delete unused layouts' prompt, the source layouts will all be merged to the new layout while layouts that are not used will all be deleted.



If you enter a new layout name and click OK, a window will pop up to ask whether you want to create a new layout, if you click yes, and enter N in the 'Delete unused layouts' prompt, the source layouts will all be merged to the new layout while other layouts will not be deleted.

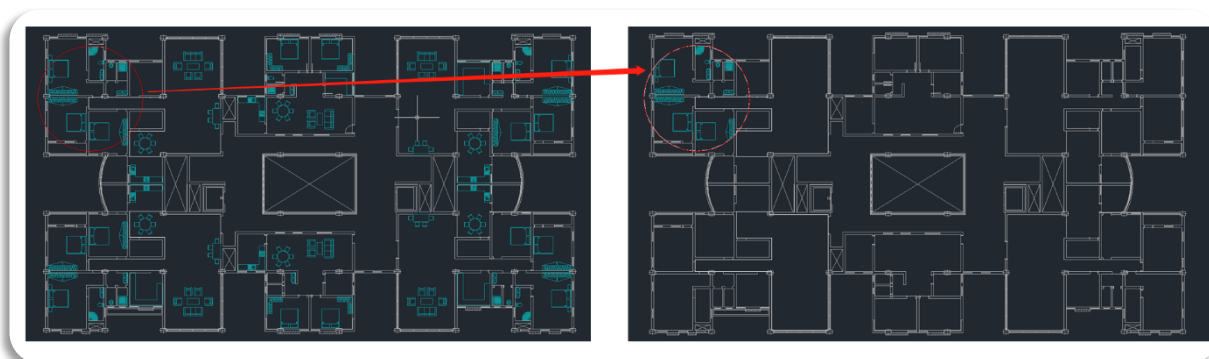
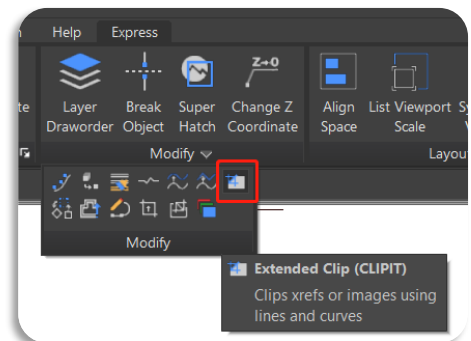


Note:

- Each merged layout will have a corresponding view saved in the destination layout and will be labeled with a rectangle and text identifier on the DEFPOINTS layer.
- Object Handle IDs are changed for all merged objects.

5.8. CLIPIT *New*

You can enter the CLIPIT command or click Ribbon ➤ Express ➤ Modify ➤ Extended Clip, to clip or remove specified portions of blocks, Xref drawings, images, and wipeout objects by defining polyline, Spline, circle, arc, ellipse, text, mtext, or attribute definition as clipping boundaries.



After enabling the command, you will be prompted to pick an object as the clipping edge:

Pick a POLYLINE, CIRCLE, ARC, ELLIPSE, or TEXT object for clipping edge...

After picking the clipping edge, you will be prompted to pick an Image/Wipeout/Xref/Block object to clip:

Pick an IMAGE, a WIPEOUT, or an XREF/BLOCK to clip...

After picking the object to be clipped, you will be prompted to enter maximum allowable error distance for resolution of arc segments:

Enter maximum allowable error distance for resolution of arc segments<0.5501>: 0.5501

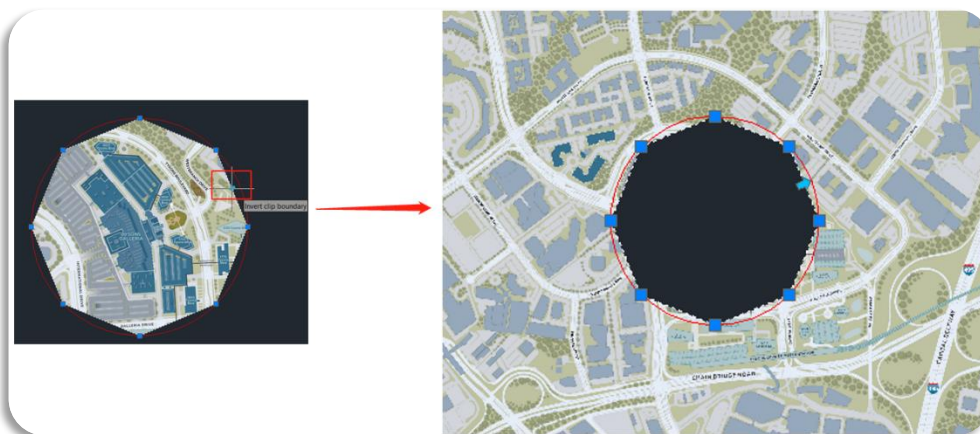
The CLIPIT command traverses arc segments with a series of short straight segments to clip to curved boundaries. the precision can be controlled by specifying the maximum distance between the midpoint of any given segment and the arc.

If you enter a large error value, you get fewer segments and faster performance, but arcs appear less smooth. Conversely, if you enter a very small value, you get smooth clipping along arcs, but worse performance during regeneration. If you enter 0, 'Value must be Nonzero' warning appears in the command line.



Invert clipping boundary:

You are able to invert the clipping boundary after clipping by selecting the boundary and clicking the 'Invert clipping boundary' grip.

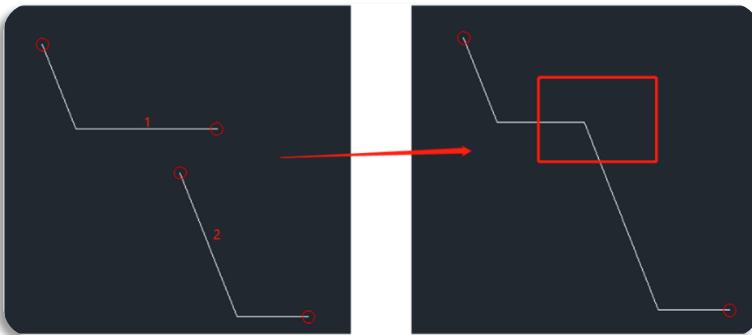
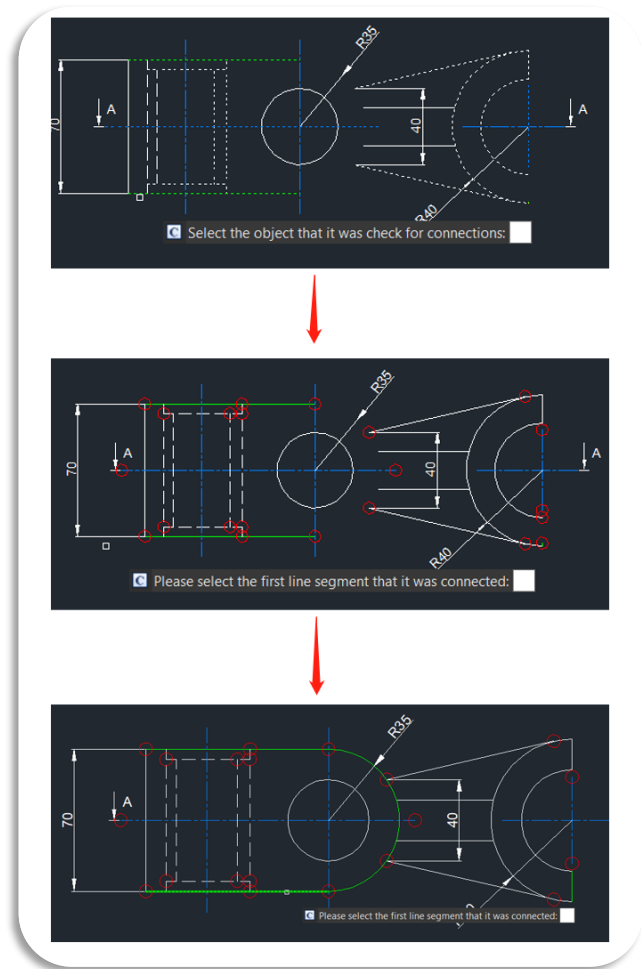


5.9. CLOSELINE *New*

You can enter the CLOSELINE command to immediately mark unclosed endpoints among selected lines, polylines or arcs, and close them conveniently.

Method of automatically closing:

- When the selected lines or polylines are parallel to each other, usually they cannot be closed, but if they are two parallel line objects, they can be closed with an arc.
- When the selected lines or polylines are not parallel to each other, they can be closed according to the position and the order they are clicked. Sometimes they need to be extended to intersect each other, and segments outside the closing point will be trimmed.



Object types that can be selected and automatically closed:

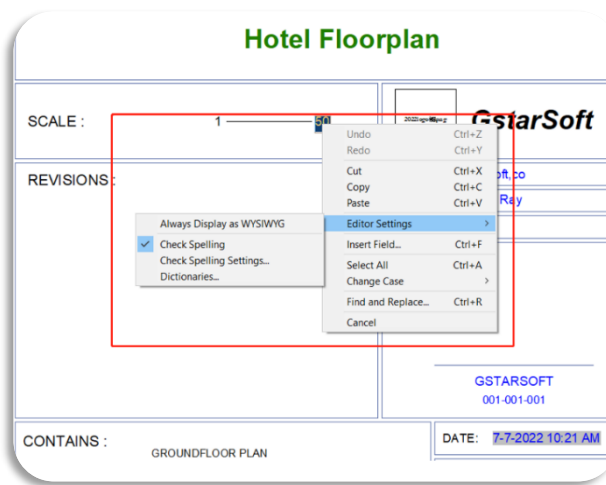
- Line ↔ Line
- Line ↔ Polyline
- Line ↔ Arc
- Polyline ↔ Polyline

Note: If you select an object that is not marked by a red circle, it cannot be closed automatically, and it will prompt 'The line segment you selected was invalid. Please select it again' in the command line.

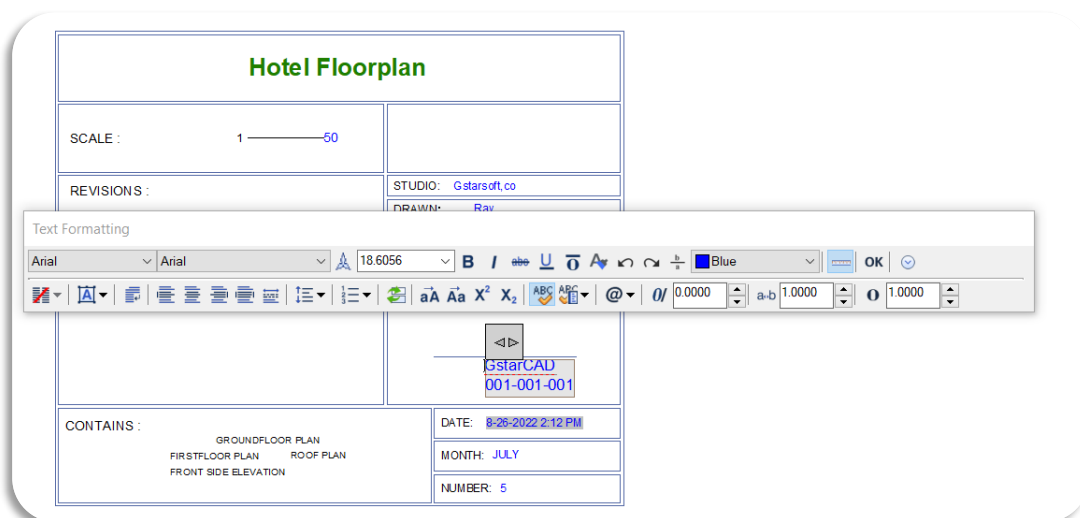
5.10. ATTIPEDIT *New*

You can enter the ATTIPEDIT command or click Ribbon ➤ Express ➤ Blocks ➤ Edits Block Attributes in Place, to edit the textual contents of an attribute of a block easily and fast when you feel like editing the attribute values in the In-Place Text Editor other than in the attribute editor.

If you select a single-line attribute, the In-Place Text Editor is displayed without the Text Formatting toolbar and the ruler. And you can right-click to display options.



If you select a multiple-line attribute, the In-Place Text Editor is displayed with the Text Formatting toolbar and the ruler.

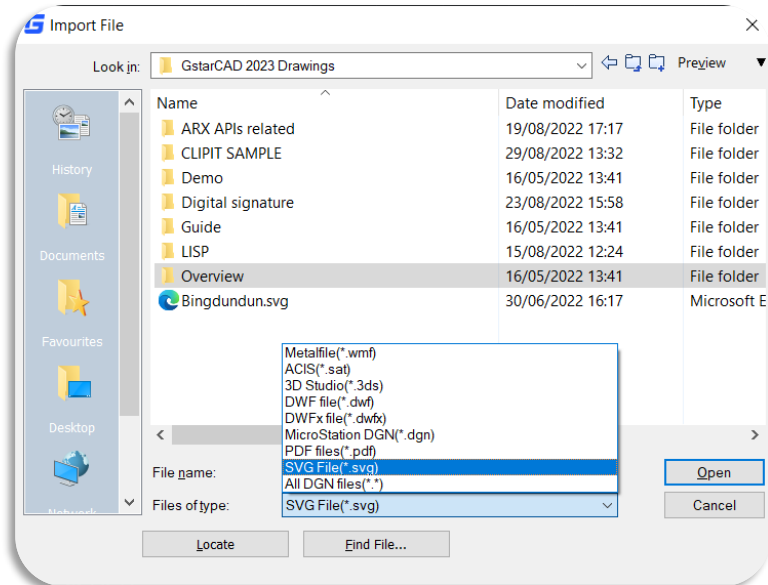


5.11. SVG File *Innovative*

In GstarCAD 2023, SVG (Scalable Vector Graphics) files are available to be imported and exported.

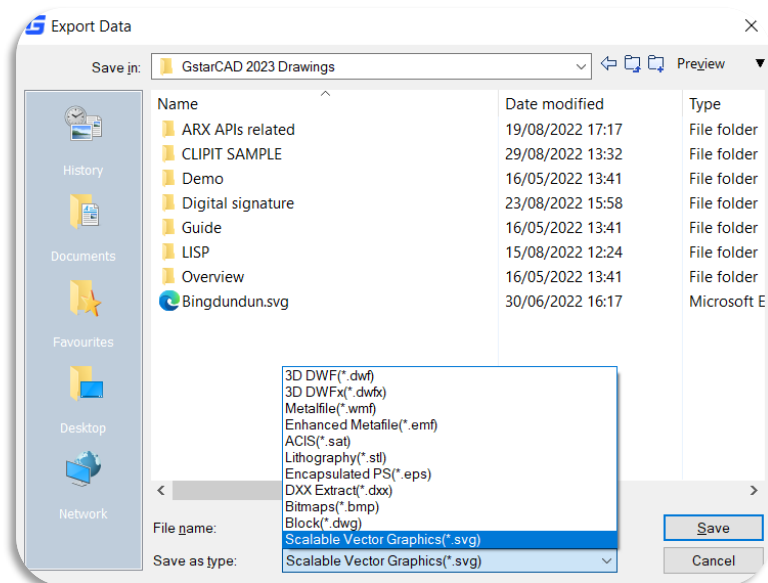
Import

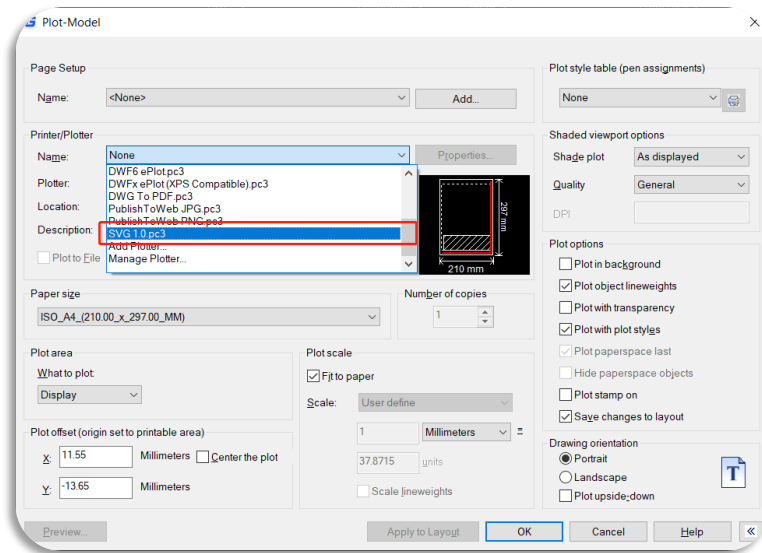
You can enter IMPORT command or Click Logo ► Import ► Other Formats and select the .svg format to import SVG files. The imported SVG graphic is a block which can be edited directly after being exploded or being edited in the block editor. Objects like lines, polylines, polygons, circles, ellipses, text and hatch can be imported correctly.



Export

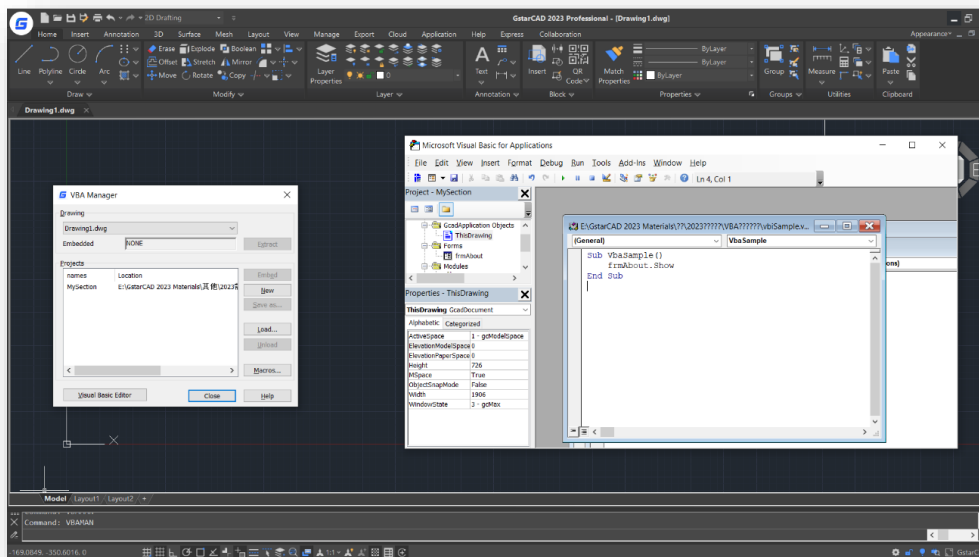
You can enter EXPORT/Plot command or Click Logo ► Export ► Other Formats and select .svg format to export SVG files. Almost all kinds of objects in a drawing can be exported as a SVG file except images. And the exported SVG file can be displayed accurately by third-party tools.





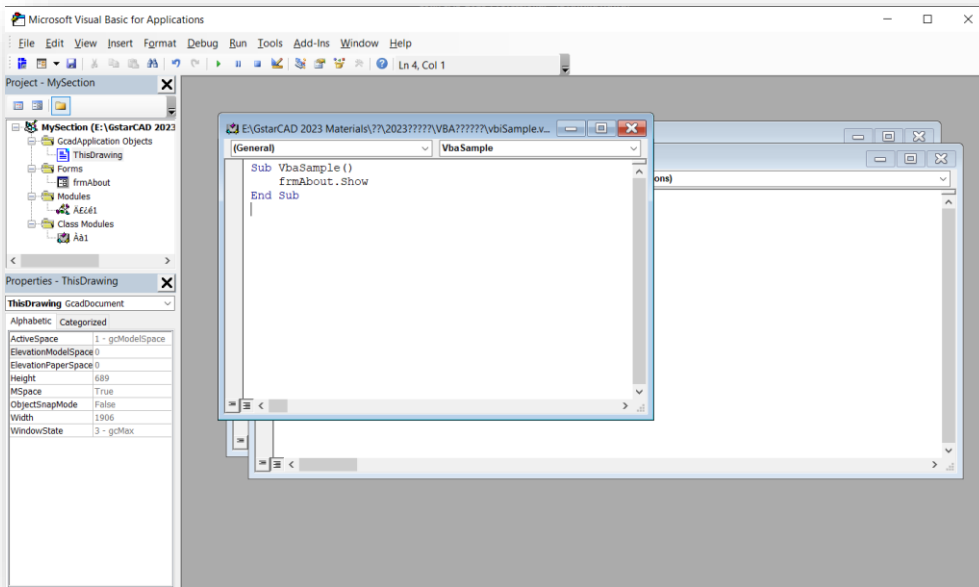
5.12. VBA *Improvement*

The 64Bit Visual Basic for Applications (VBA) has been supported in the GstarCAD 64bit Platform since GstarCAD 2023. You are able to access and use the VBA integrated development environment (VBAIDE) and work with the GstarCAD object model.

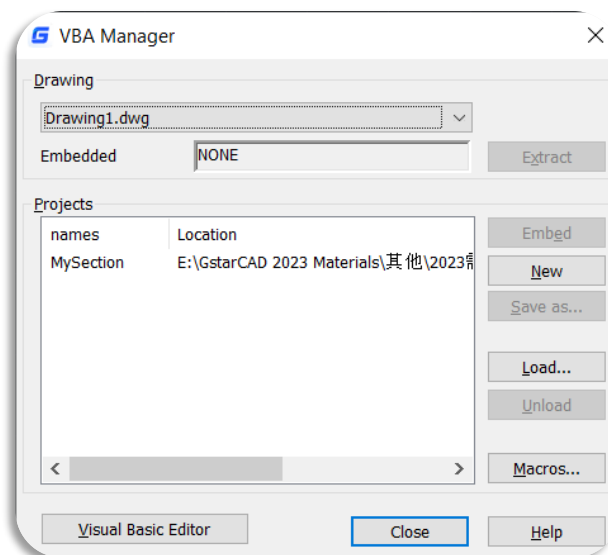


Visual Basic for Applications (VBA): A programming environment created by Microsoft that is built into applications to automate operations. You can drag and drop tools to build a graphical user interface (GUI) and use the programming language to interact with GstarCAD objects.

VBAIDE Command: Launches the AutoCAD Visual Basic for Applications Integrated Development Environment. You can enter the VBAIDE command to access the VBA integrated development environment to create a simple VBA application, create the graphical user interface (GUI), and write code to execute simple commands.



VBAMAN Command: Displays the VBA Manager.

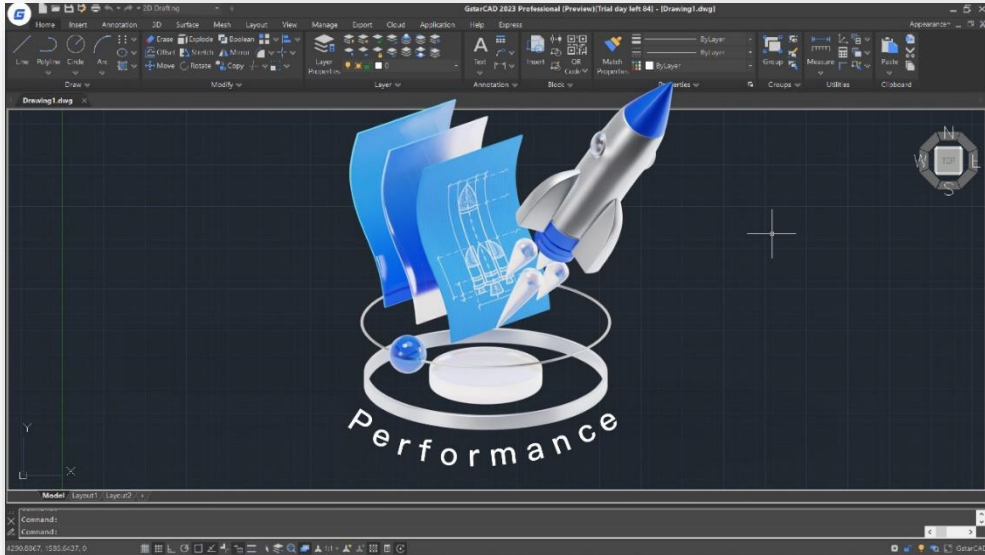


Note:

- The 32Bit GstarCAD Platform and 32Bit VBA are not going to be provided since GstarCAD 2023.
- You can find more information about how to migrate programs that are developed with AutoCAD VBA to GstarCAD VBA in the GstarCAD 2023 VBA Project Migration Guide document.

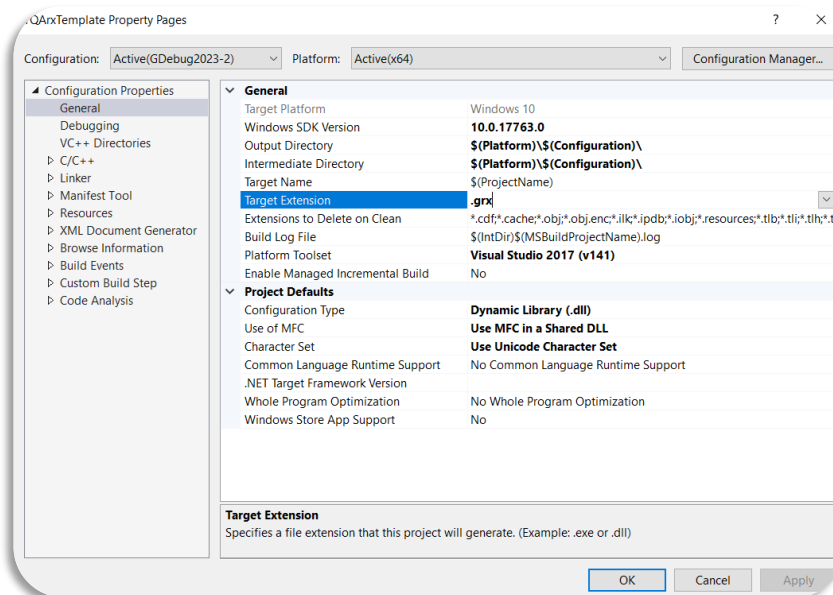
5.13. Performance *Improvement*

Multi-Core is supported in GstarCAD 2023, which makes the performance significantly optimized. The speed of opening drawings increases by almost 100%, and the operation process is much smoother.



5.14. ObjectARX API *Improvement*

GstarCAD 2023 GRX is perfectly compatible with AutoCAD ObjectARX 2020 APIs, programs can be successfully compiled, loaded and used without editing code. You just need to modify some options of the Configuration Properties and Rebuild Solution.



GRX: The Runtime extension programming environment of GstarCAD, which is compatible with ARX application programs of AutoCAD on the source-code level.

Note:

- The APIs are not going to be changed in the next several years, so the applications only need to be migrated once.
- You can find more detail information about GRX Migration, Development and Upgrade at GstarCAD 2023 GRX Migration Guide document, GstarCAD 2023 GRX Development Guide document and GstarCAD 2023 GRX Upgrade Guide document.

5.15. Block Editor *Improvement*

The BAUTHORPALETTE and BTABLE commands are supported to enhance the compatibility of the block editor.

5.15.1. BAUTHORPALETTE

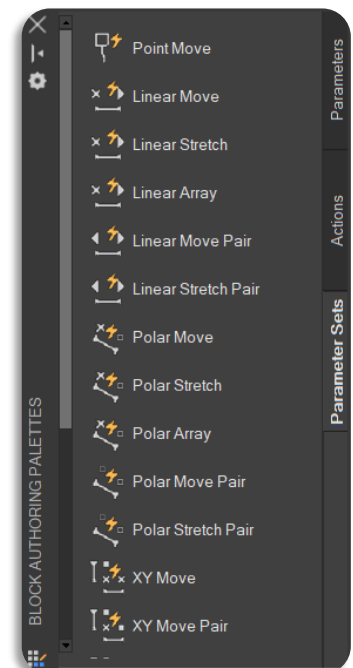
You can enter the BAUTHORPALETTE command or click Ribbon ➤ Block Editor ➤ Tools ➤ Authoring Palettes to open it.

The Block Authoring Palettes window contains the following **tabs**:

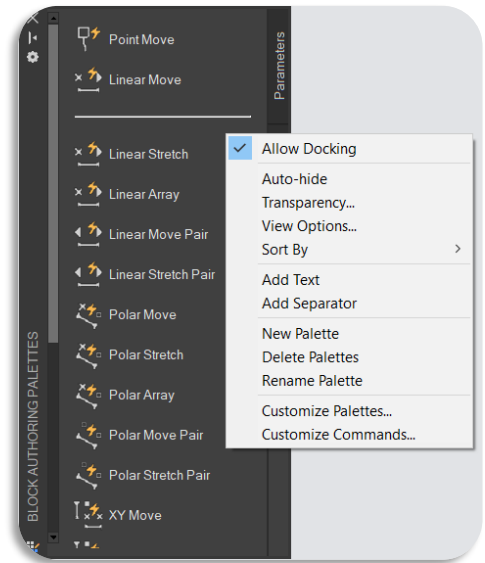
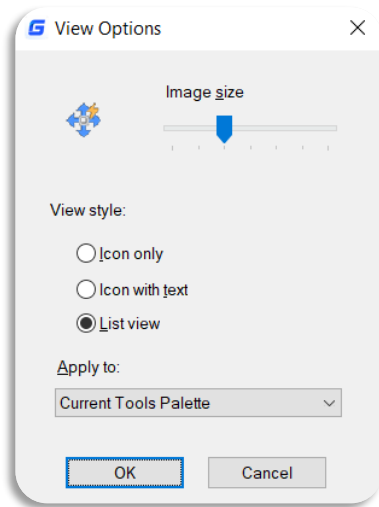
- Parameters tab
- Actions tab
- Parameter Sets tab

Right click the floating Block Authoring Palettes window:

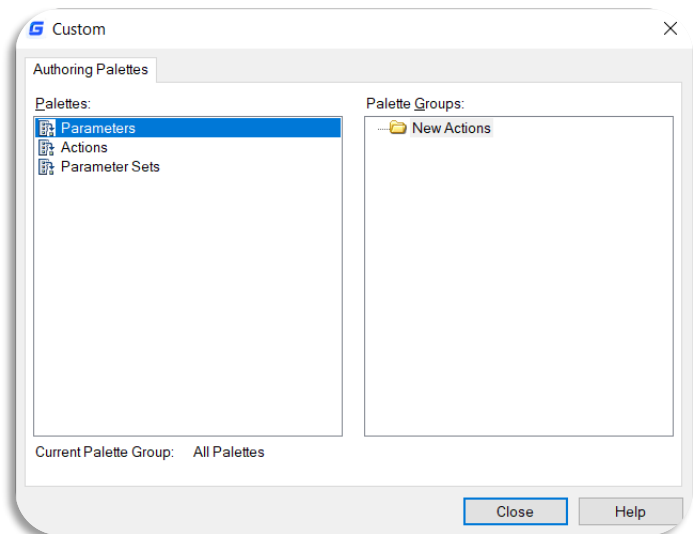
- Allow Docking: Allows/disallows the window to be pinned to the side.
- Auto-hide: Automatically hides when the cursor is moved away.
- Transparency: Controls transparency of the window.



- View Options: Tab display settings, you can define the image size, View style and whether to apply the setting to all tool palettes.



- Sort By: Sorts by Name/Type.
- Add Text: Adds a line of unselectable text in the tab where the mouse hovers.
- Add Separator: Adds a line separator at the mouseover position in the tab.
- New Palette: Creates a new tab.
- Delete Palettes: Deletes a tab.
- Rename Palette: Renames a tab.
- Customize Palettes: Creates, modifies and organizes Palettes and Palette groups, as well as imports and exports the Palettes files.
- Customize Commands: Not available in the Block Editor.



Note: You can open the Block Authoring Palettes window only from the Block Editor.

5.15.2. BTABLE

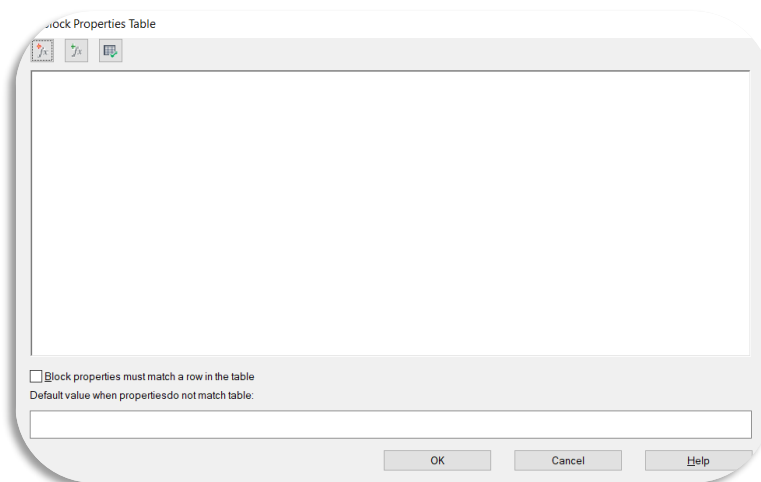
You can enter the BTABLE command to store variations of a dynamic block in the Block Properties Table. You can access values of one row by the lookup grip, each row in the table defines a different variation of the dynamic block.


Properties available in the Block Properties Table including: Legacy parameters and User parameters.

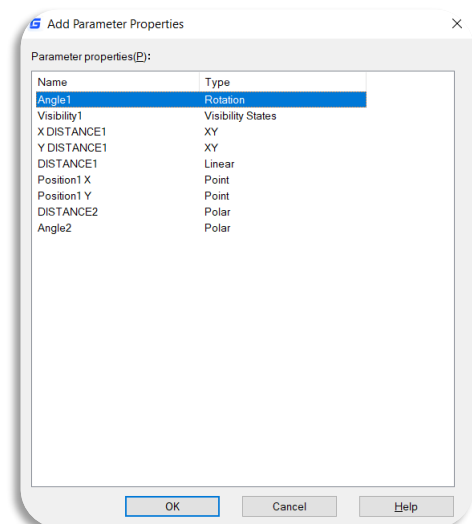
After enabling the BTABLE command, if a block table is already created in the block editor, the Block Properties Table dialog box will be displayed immediately. If there is no block table in the Block Editor, you will be prompted:


- Specify parameter location: Specifies where the grip and table icon are located in the block definition.
- Palette: Specifies whether the block table item is displayed in the Properties palette when the block reference is selected.
- Enter number of grips: Specifies the number of grips to use. You can choose value 0 or 1, value 0 means there will be no grip displayed when you select the dynamic block.

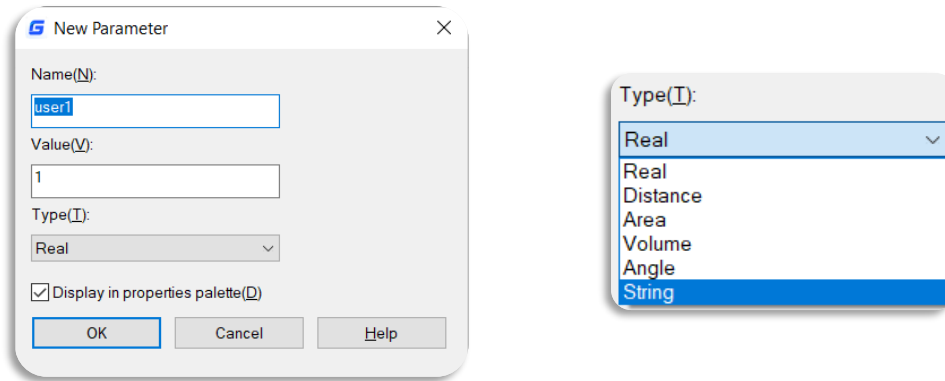
The Block Properties Table window includes:




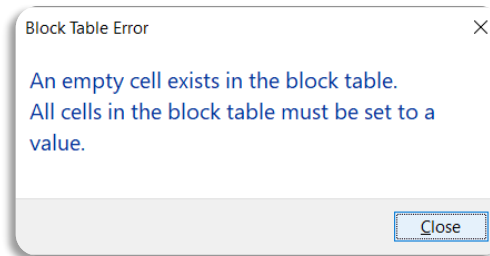
-  : Displays Add Parameter Properties window, adds properties which appear as columns in the table. Properties that already have been selected are not displayed in the list. And Basepoint, Lookup and Alignment parameter properties can't be added to the table.



-  : Displays New Parameter window, creates a new user parameter and adds it to the table. There are six types can be created, including: Real, Distance, Area, Volume, Angle, Sting.



-  : Audits the block property table for errors. If there is an error, a warning window will pop up:



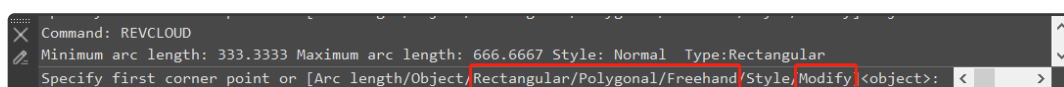
- Block properties must match a row in the table: specifies whether the properties added to the grid control can be modified individually for a block reference.
- Default value when properties do not match the table: Displays the default value when other properties are changed without matching a row.

Note:

- The legacy action parameters that are added to the lookup tables cannot be added to the Block Properties Table.
- You can open the Block Authoring Palettes window only from the Block Editor.

5.16. REVCLLOUD *Improvement*

In GstarCAD 2023, the REVCLLOUD command adds “Rectangular”, “Polygonal” “Modify” and “Freehand” options, as well as three more system variables.



After enabling the REVLOUD command, the following prompts are displayed in the command line:

Minimum arc length, Maximum arc length, Style, Type:

When the same drawing is opened with a higher version, the minimum arc length/maximum arc length may be different from what are specified in the lower version.

- Rectangular: Creates a rectangular revision cloud that is defined with two diagonally opposite corner points.
- Polygonal: Creates a polygon revision cloud that is defined by three or more points that are used as vertices to generate the revision cloud.
 - Specify next point: Specifies the next point to define the polygon. This prompt repeats until you click an existing vertex in the revision cloud.
- Freehand: Creates a freehand revision cloud.
- Modify: Redefines an existing revision cloud by specifying one or more new points. The option replaces specified portions of an existing revision cloud with a new portion defined by the points that you enter.
 - Select polyline to modify: Specifies which revision cloud to modify. The start of the replacement section is specified to the revision cloud vertex which is closest to where you click.
 - Specify next point: Specifies the next point to define the polygonal shape of the replacement section. This prompt repeats until you click an existing vertex in the revision cloud.
 - Pick a side to erase: Trims the existing revision cloud.
 - Reverse direction: Inverts the arcs in the revision cloud between convex and concave.

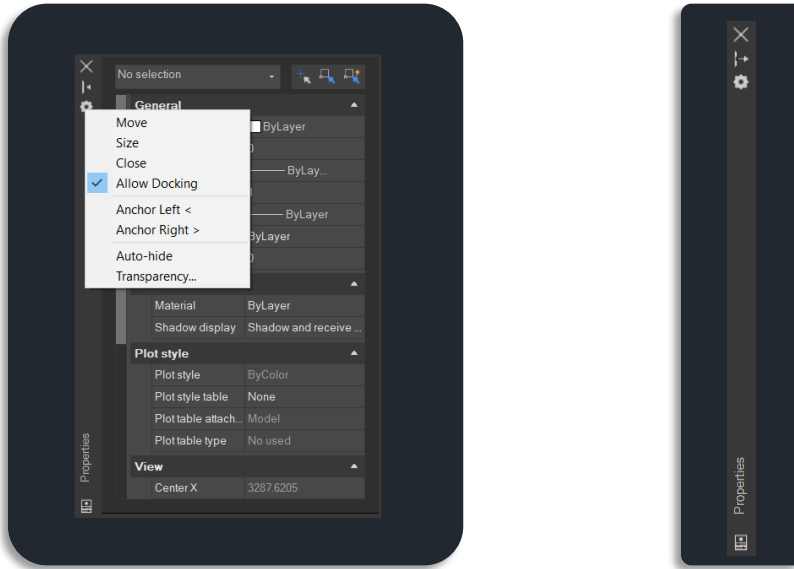
System Variable	Description	Value	Value Description
REVLOUDGRIPS	Controls the number of grips displayed on a revision cloud	0	Displays a grip for each arc segment on a revision cloud
		1	Displays limited number grips on a revision cloud
REVLOUDAPPROXARCLNE	Controls the approximate chord length for the arcs in a revision cloud.	From 0.0000	/
REVLOUDARCVARIANCE	Controls whether revision cloud arcs are created with varying or generally uniform chord lengths	0	Arcs are created with generally uniform chord lengths
		1	Arcs are created with varying chord lengths makes it looks more hand-drawn

Note:

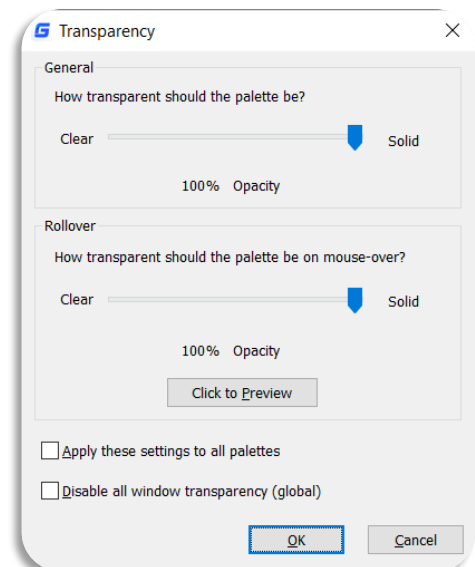
- When the REVLOUDGRIPS system variable is off (value=0), grips can be used to edit individual arc and chord lengths on the revision cloud.
- When the REVLOUDGRIPS system variable is on (value =1), the cloud can be stretched or vertices can be added, deleted, or stretched according to the grip position.

5.17. PALETTES *Improvement*

You can click the Properties button or right-click on the Title bar of the palette or window to enable Anchor left/right, Auto-hide (There is an Auto-hide button in the Title bar) or adjust the transparency of the floating palettes or windows.



- Anchor Left<: Anchors a dockable window or palette to the left of the drawing area. When the cursor is moved on it, the anchored palette or window displays with full opaque, when the cursor is moved away, it hides automatically. Also, when an anchored window is open, its content overlaps the drawing area.
- Anchor Right>: Anchors a dockable window or palette to the right of the drawing area. When the cursor is moved on it, the anchored palette or window displays with full opaque, when the cursor is moved away, it hides automatically. Also, when an anchored window is open, its content overlaps the drawing area.
- Auto-hide: A floating window rolls open and closes as the cursor moves across it. When this option is unchecked, the window stays open.
- Transparency: Adjusts the level of transparency for the window and on mouse over.
 - How transparent should the palette be: Sets the transparency of a palette while the cursor moves away from the palette. It's also controlled by the GLOBALOPACITY system variable.
 - How transparent should the palette be on mouse-over: Sets the transparency of a palette while the cursor moves on the palette. It's also controlled by the ROLLOVEROPACITY system variable.



- Click to Preview button: Press the button, it displays the transparency of palette while the cursor moves away from the palette, release the button, it displays the transparency of a palette while the cursor moves on the palette.
- Apply these settings to all palettes: Applies transparency settings to all palettes. It's also controlled by the APPLYGLOBALOPACITIES system variable.
- Disable all window transparency(global): Controls whether palettes can be adjusted transparency. It's also controlled by the PALETTEOPAQUE system variable.

Floating Palettes and Windows that are enhanced include:

- PROPERTIES
- TOOLPALETTES
- QUICKCALC
- XREF
- SHEETSET
- ADCENTER
- LIGHTLIST
- MATERIALS
- VISUALSTYLES
- LAYER
- DRAWINGRECOVERY
- POINTCLOUDMANAGER
- BAUTHORPALETTE (Only available in the Block Editor)
- COMMANDLINE

Note:

- The Anchor Left and Anchor Right options are available only when Allow docking option is selected.
- Transparency is unavailable when palettes or windows are docked.
- The transparency level of a palette while the cursor moves over the palette should not be smaller than the transparency level of the palette.
- COMMANDLINE doesn't support "Apply these settings to all palettes" or "Disable all window transparency(global)" option in its Transparency dialog box.

- SHEETSET, ADCENTER, DRAWINGRECOVERY, QPMODE and TOOLBAR don't support adjust transparency.
- To place the palette or window in a docking area without docking it, just hold down the Ctrl key while dragging.

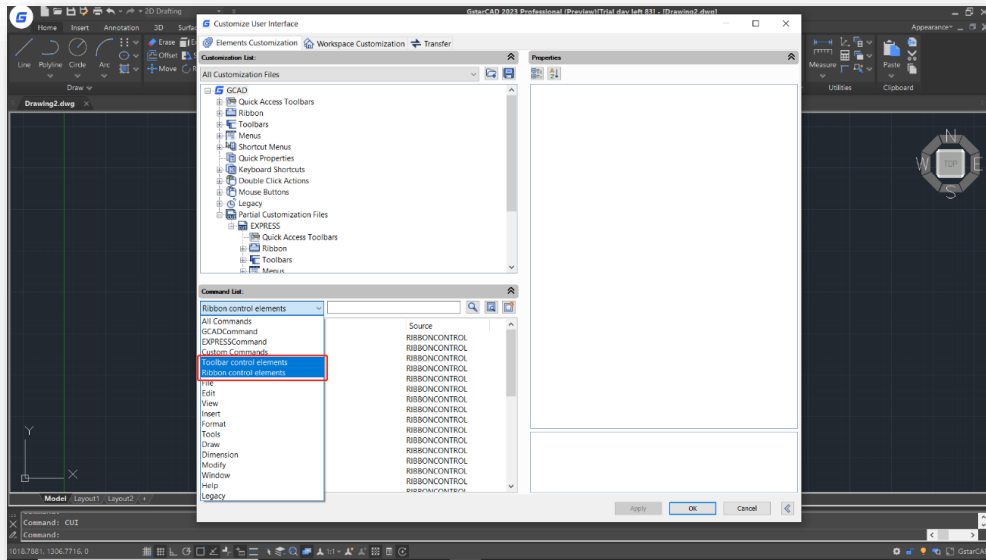
Memories Locations and Settings:

The settings and locations of floating palettes or windows will remain the same when you access them again after opening a new drawing or restarting the software.

System Variable	Description	Value	Value Description
PALETTEOPAQUE	Controls whether palettes can be adjusted transparency	0	Turns on palette transparency
		1	Turns off palette transparency
ROLLOVEROPACITY	Controls the transparency of a palette while the cursor moves over the palette	0-100	Full transparent to full opaque
APPLYGLOBALOPACITIES	Controls whether to apply the transparency settings to all palettes	0	Transparency settings off
		1	Transparency settings on
GLOBALOPACITY	Controls transparency level for all palettes	0-100	Full transparent to full opaque

5.18. CUI Editor *Improvement*

"Ribbon Control Elements" and "Toolbar Control Elements" items are added to the categories drop-down list in the command list pane of the CUI editor, which you can select to filter and add elements quickly.



- Ribbon control elements: Filters Ribbon control elements, such as:

Command	Source
Array Level Count	RIBBONCONTROL
Array Level Spacing	RIBBONCONTROL
Array Level Span	RIBBONCONTROL
Array Row Count	RIBBONCONTROL
Array Row Elevation	RIBBONCONTROL
Array Row Spacing	RIBBONCONTROL
Array Row Span	RIBBONCONTROL
Layer List Combo Box	RIBBONCONTROL
Layer State Gallery	RIBBONCONTROL
LayerFilterComboControl	RIBBONCONTROL
Named UCS Combo Control	RIBBONCONTROL
Path Array Item Count	RIBBONCONTROL
Path Array Item Spacing	RIBBONCONTROL
Path Array Item Span	RIBBONCONTROL
Path Array Type	RIBBONCONTROL
Polar Array Item Count	RIBBONCONTROL
Polar Array Item Spacing	RIBBONCONTROL
Polar Array Item Span	RIBBONCONTROL
Polar Array Type	RIBBONCONTROL
Rect Array Column Count	RIBBONCONTROL
Rect Array Column Spacing	RIBBONCONTROL
Rect Array Column Span	RIBBONCONTROL
Rect Array Type	RIBBONCONTROL
Ribbon Combo Box - Block Visibility States	RIBBONCONTROL
Ribbon Combo Box - Dimension Style	RIBBONCONTROL
Ribbon Combo Box - Linetype	RIBBONCONTROL
Ribbon Combo Box - Lineweight	RIBBONCONTROL
Ribbon Combo Box - Multileader Style Manager	RIBBONCONTROL
Ribbon Combo Box - Object Color	RIBBONCONTROL
Ribbon Combo Box - PlotStyle	RIBBONCONTROL
Ribbon Combo Box - Table Style	RIBBONCONTROL
Ribbon Gallery - Text Style	RIBBONCONTROL
Toolbar	RIBBONCONTROL
Transparency	RIBBONCONTROL

- Toolbar control elements: Filters Toolbar control elements, such as:

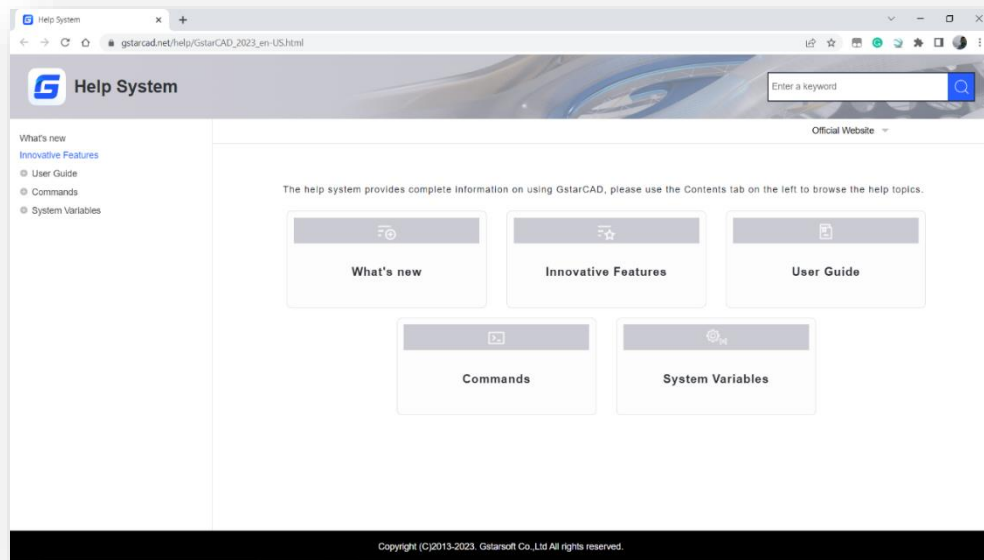
Command	Source
Dim Style Control	CONTROL
Layer Control	CONTROL
Line Type Control	CONTROL
Line Weight Control	CONTROL
Multileader Style Control	CONTROL
OPT Color Control	CONTROL
Plot Style Control	CONTROL
Redo Skinny Button Control	CONTROL
Reference Block Name Control	CONTROL
Table Style Combo Control	CONTROL
Text Style Control	CONTROL
UCS Control	CONTROL
Undo Skinny Button Control	CONTROL
Viewport Scale Control	CONTROL
Visible State Control	CONTROL

Two elements are added under Ribbon Control Elements category:

- Layer State Gallery: Allows users to add a layer state pulldown in the Ribbon, which can show the existing layer states and access layer states manager.
- LayerFilterComboControl: Allows users to add a Layer Filter Combo Control pulldown in the Ribbon, which can access your filters directly from the ribbon and turn layers on/off and freeze/thaw them in logical groupings.

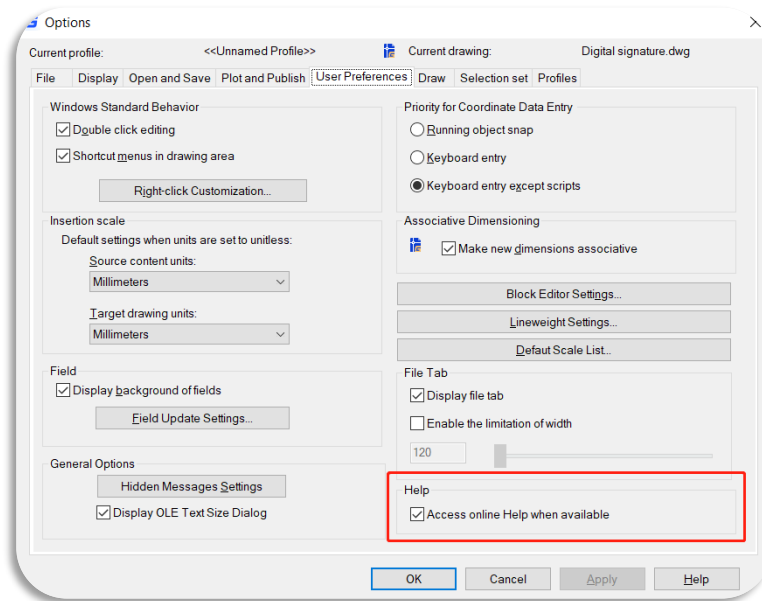
5.19. HELP *Improvement*

You can press F1, enter HELP command or click Ribbon ➤ Help ➤ Help to access the Online Help in your default browser. Clicking the help button in the dialog box of the software can access the Help page where the command is located. Whether you are creating a new drawing or opening an existing drawing, press Enter, and the Online Help will pop up.

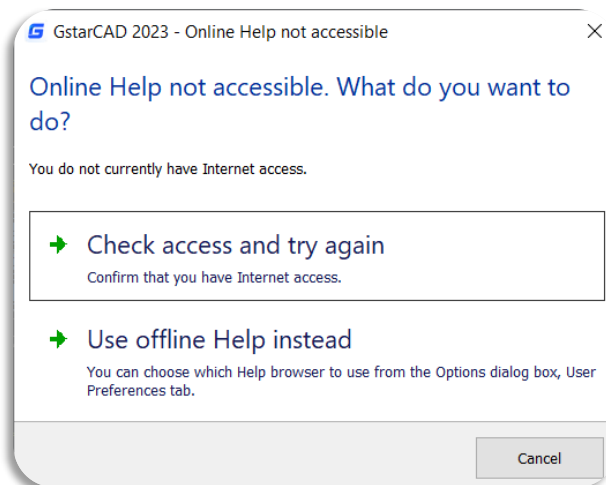


You can set whether to access online help in Options window:

- Access online Help when available: Specifies whether Help content is accessed from the GstarCAD website, or from locally installed files.



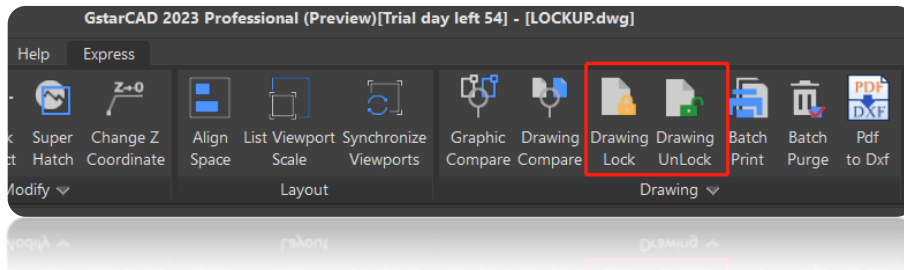
If you are not connected to the internet, a dialog box will pop up, allowing you to choose to use offline Help instead:



Note: When the cursor hovers over a command in the ribbon or toolbar, and a tooltip prompt appears, Pressing F1 can navigate to the Help page of this command.

5.20. LOCKUP *Improvement*

You can enter the LOCKUP command or click Ribbon ► Express ► Drawing ► Drawing Lock to lock selected objects in a drawing with a password to prevent accidentally being modified or deleted, and enter the UNLOCK command or click Ribbon ► Express ► Drawing ► Drawing Unlock and input the password to unlock them.

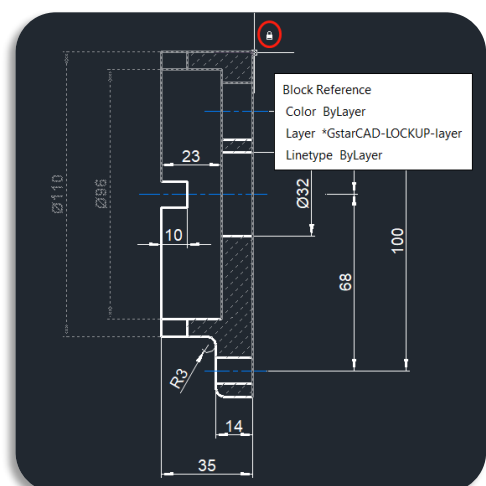


After enabling the **LOCKUP** command, the following prompts are displayed:

- Objects will not be able to be modified after using this function, would you like to continue? [Yes(Y)/No(N)]: Confirms whether to continue executing the command.
- Select Object: Selects objects that you want to lock in the drawing. If any of them is already locked, the “1 was on a locked layer” prompt will be displayed in the command line.
- Do you want to create a password [Yes(Y)/No(N)]: Asks whether to add a password after locking objects.
- Enter password: Inputs the password you set for the locked objects.

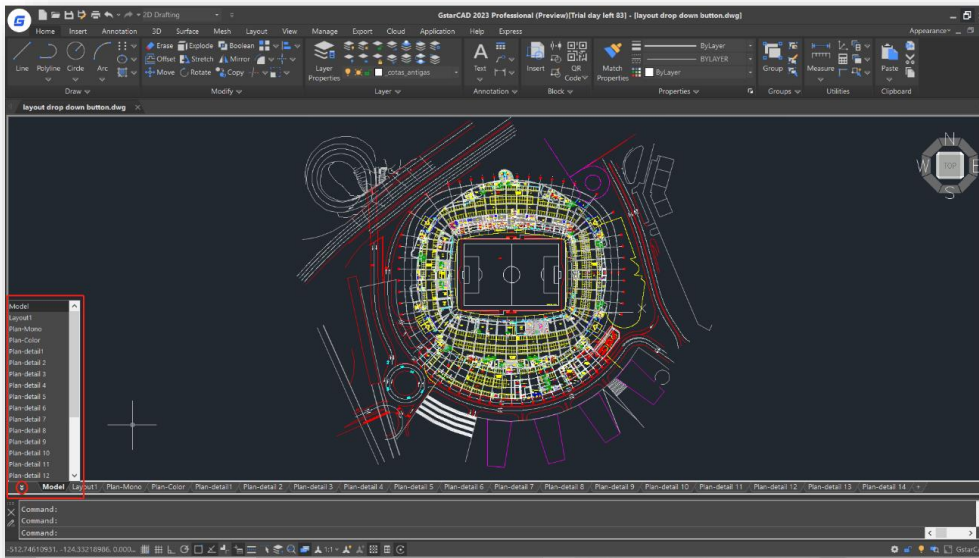
Note:

- The locked objects can be selected as trim boundaries to unlocked objects.
- The locked objects are turned into a block reference, and displayed on a temporary layer.
- The locked objects can be selected. A little lock mark is displayed when you hover the cursor on a locked object.
- When executing the ERASE command to delete the locked objects, the delete command cannot be executed, and the “1 was on a locked layer” prompt will be displayed in the command line.
- Versions lower than GstarCAD 2023 may not unlock the objects locked with password.



5.21. Layout Expand Button *Improvement*

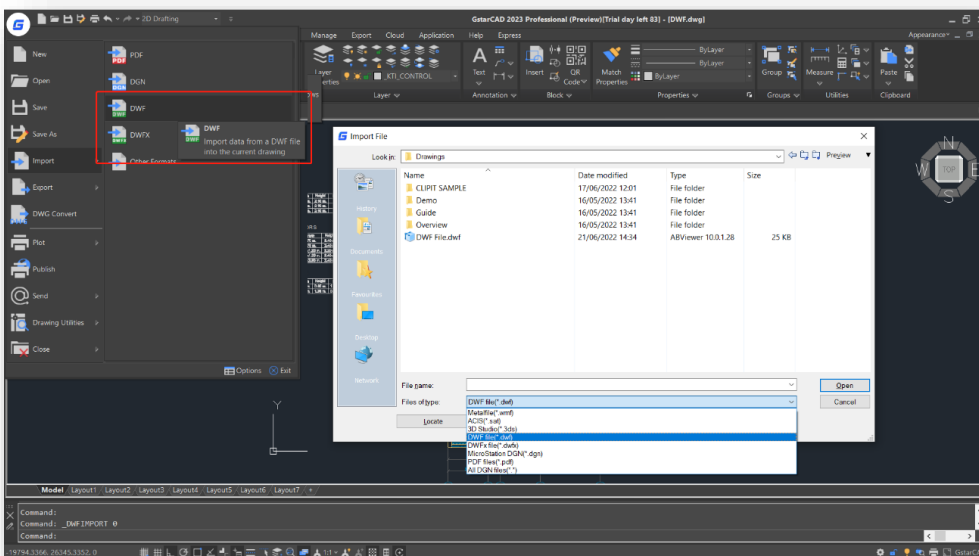
When there are too many layouts in your drawing and some of them are not visible, the Layout Expand Button at the left side of the Layout Tabs can open a layout list that allows jumping to any existing layout quickly.



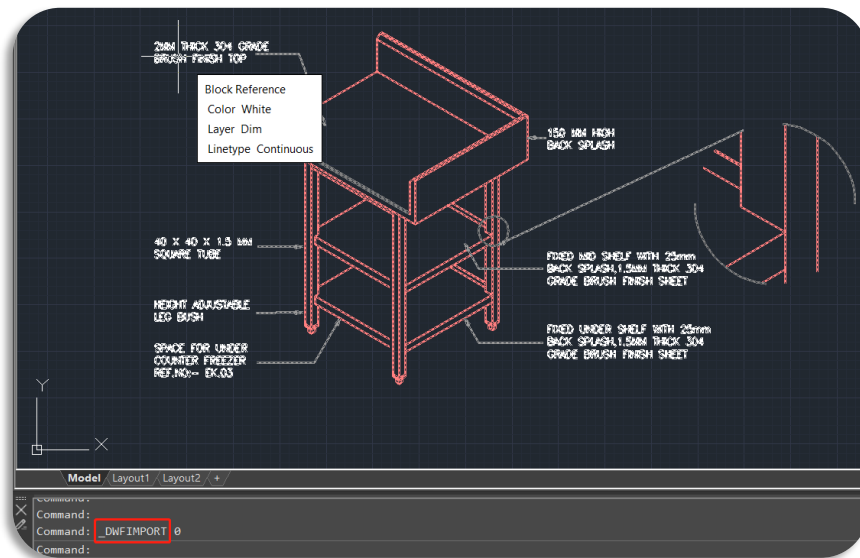
Note: The button won't be displayed if there is enough space for layout names.

5.22. DWF Import *Improvement*

You can enter DWFIMPORT command, click Logo ➤ Import ➤ DWF, or Execute IMPORT command and select the DWF file to import DWF files in GstarCAD 2023.



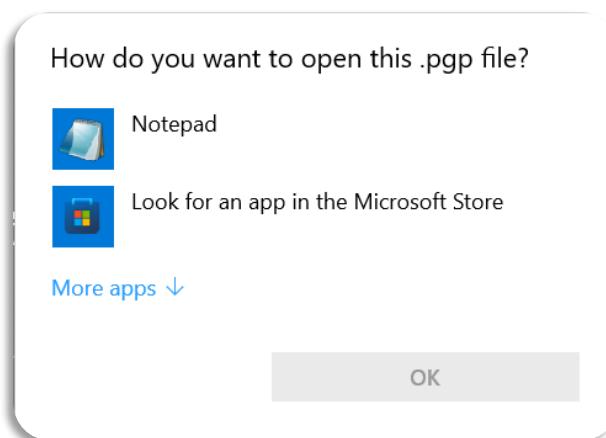
The imported DWF file is displayed as a block reference in GstarCAD 2023, you can edit it after exploding with EXPLODE or BURST command.



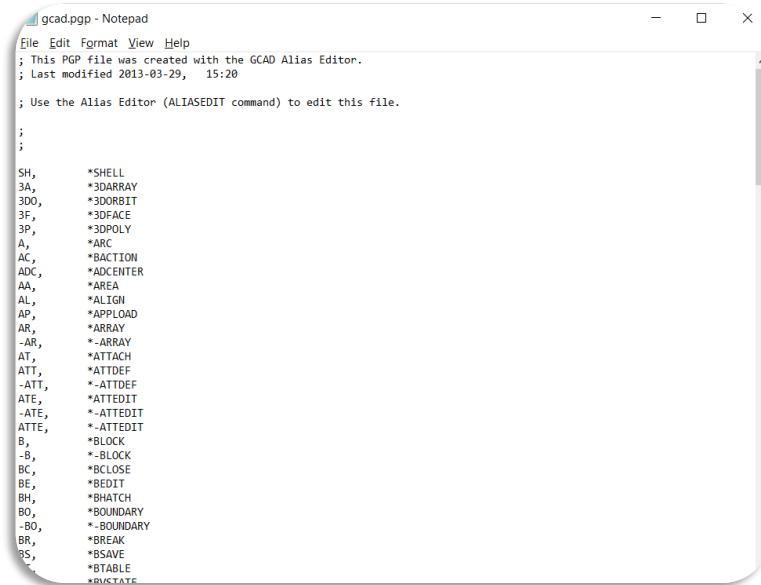
5.23. AI_EDITCUSTFILE *Improvement*

You can enter the AI_EDITCUSTFILE command to open the Program Parameters (PGP) text file where you can add or edit your command aliases. You can also access the PGP file by clicking Ribbon > Manage > Customizes settings > Edit Aliases.

After executing the command, a dialog box pops up, asking you to pick a platform to open the .pgp file:



For example, opening it with Notepad:



```
gcad.pgp - Notepad
File Edit Format View Help
; This PGP file was created with the GCAD Alias Editor.
; Last modified 2013-03-29, 15:20

; Use the Alias Editor (ALIASEDIT command) to edit this file.
;
;
SH, *SHELL
3A, *3DARRAY
3DO, *3DORBIT
3F, *3DFACE
3P, *3DPOLY
A, *ARC
AC, *BACTION
ADC, *ADCENTER
AA, *AREA
AL, *ALIGN
AP, *APpload
AR, *ARRAY
-AR, *-ARRAY
AT, *ATTACH
ATT, *ATTDEF
-ATT, *-ATTDEF
ATE, *ATTEDIT
-ATE, *-ATTEDIT
ATTE, *-ATTEDIT
B, *BLOCK
-B, *-BLOCK
BC, *BCLOSE
BE, *BEDIT
BH, *BHATCH
BO, *BOUNDARY
-BO, *-BOUNDARY
BR, *BREAK
BS, *BSAVE
BT, *BTABLE
BU, *BUSTATE
```

Note: If you edit a PGP file while GstarCAD is running, you can enter the REINIT command to use the aliases that are edited in the file, or restart GstarCAD to automatically reload the file and use them.



GstarCAD 2023



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