GstarCAD 2024 vs
ARES Commander 2024

GstarCAD 2024
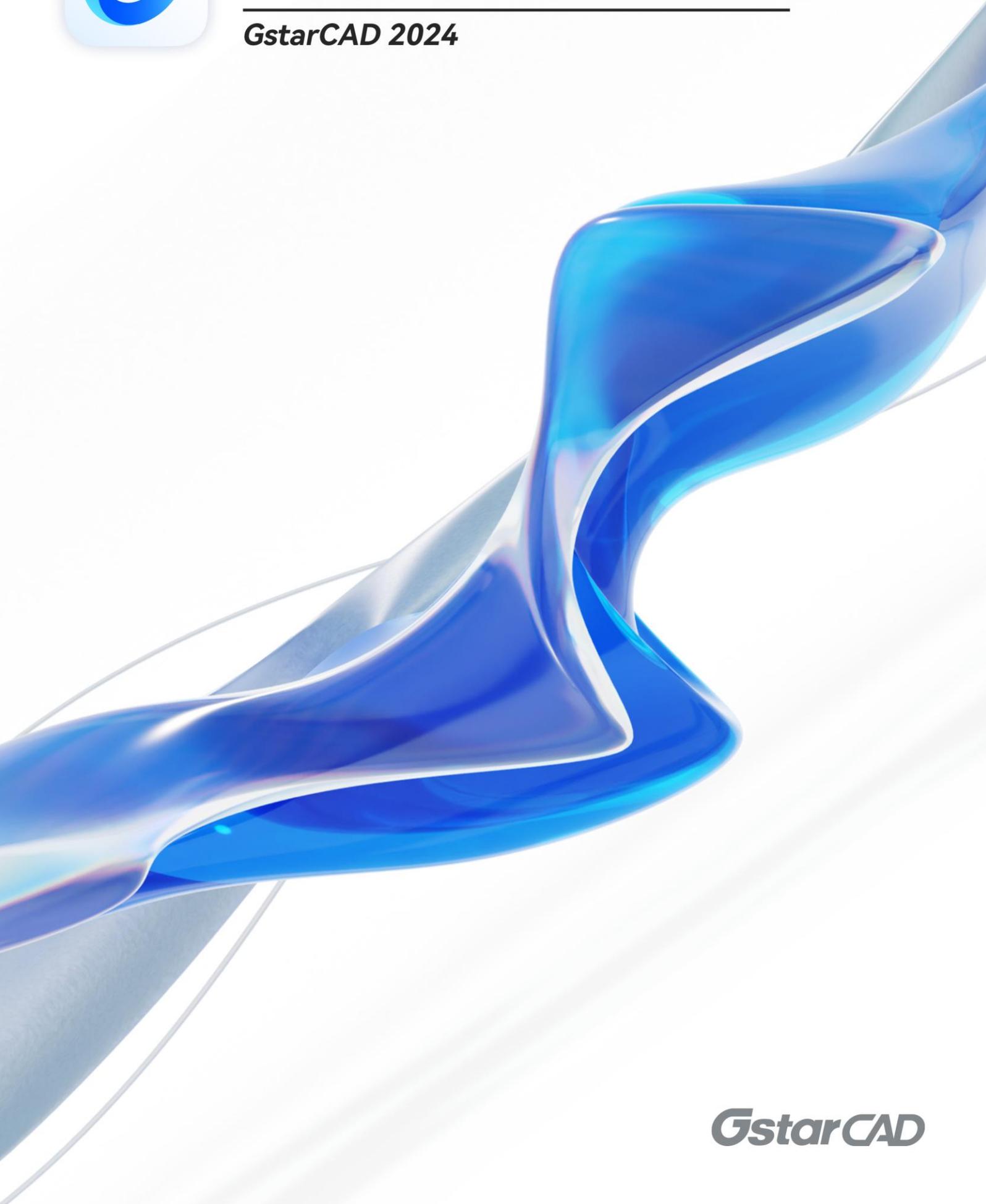
GstarCAD

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GstarCAD 2024 VS ARES Commander 2024

With accelerated performance, enhanced compatibility and elevated user experience, GstarCAD 2024 takes design productivity to new heights. Experience our optimized operation speed and quality, enjoy the expanded compatibility for more file formats and APIs, and discover a new level of design satisfaction with upgraded Dynamic Input tool and adjustable viewports, etc.

1. Comprehensive Evaluation

● Compatibility

GstarCAD offers robust APIs for developers to migrate or build applications on GstarCAD, including GRX, .NET, VBA, LISP, and COM. Built on advanced C＋＋/CLI technology,

.NET secondary development interface offers a reliable platform for developers. With 100% integrity in core module interfaces that are most commonly used, GstarCAD 2024 ensures efficient development and seamless cross-platform compatibility.

The encoding format of the LISP module has been optimized and adjusted to ensure complete compatibility with ANSI, UTF-8, UTF-16, UTF-8 BOM, and other encoding formats used in LISP, FAS, VLX, and DCL files, enabling efficient and seamless secondary development in GstarCAD 2024.

ARES Commander 2024 doesn't support load the FAS and VLX Programs.

● 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. GstarCAD is especially outstanding in dealing with the big size drawings that contain a large number of entities. The basic operations, such as move, copy, rotate, scale and so on are significantly enhanced to boost the working efficiency of designers. ARES Commander 2024 has obvious disadvantage of the performance, it stacks when booting the software, workspace and layout space switching. Though some operation speed enhances in this version, such as select, copy, paste and undo, it still has a big gap with GstarCAD.

- **Functionalities**

ARES Commander 2024 releases new features of Flatten and Lisp Editor which have been already supported by GstarCAD. GstarCAD not only continuously improves and develops new features to increase productivity, but also develops many innovative functions in order to improve work efficiency. Comparing the total commands, GstarCAD 2024(more than 900 commands) provides two hundreds more commands than ARES Commander 2024 (more than 700 commands). In addition, the function detail is more attractive and useful.

- **User Experience**

GstarCAD brings you the familiar interface, commands and user operating habit. While ARES Commander has been retaining the traditional interface, operating habit, and provides the incompatible commands and offers the complex tree structure which brings bad user experience. Users will feel unfamiliar with ARES commander when getting started with it.

2. Compatibility Comparison

The main compatible file formats and application development interfaces comparison:

Item	GstarCAD 2024	ARES Commander 2024
2018 DWG/DXF	√	√
2.5-2018 DWG/DXF	√	√
Template file DWT	√	√
Standard file DWS	√	√
Interface file CUI/CUIX	√	√
Old menu file MNU	√	√
Sheet set file DST	√	√
Hatch file PAT	√	√
Font file SHX	√	√
Linetype file LIN	√	√
Print style file CTB	√	√
Import WMF	√	×
Export WMF	√	√
Import/export SAT	√	√
Import 3DS	√	×
Import and Export PDF	√	√
Import DGN	√	√
Import IFC	√	√
Import SVG	√	×
STEP/IGES Files	√	×
Import DWF/DWFX	√	√
Export DWF/DWFX	√	√
Export STL	√	√
Export EMF	√	√
DWF underlay	√	√
DGN underlay	√	√
PDF underlay	√	√
Load LISP program	√	√
Load FAS program	√	×
Load DBX program	√	×
Load VLX program	√	×

VBA develop interface	√	×
Class ARX develop interface	√	√
.net develop interface	√	√

3. Performance Comparison

The performance of common-use operations like "OPEN", "SAVE", "MOVE", "COPY", "CTRL＋C", "CTRL＋V" are significantly faster than ARES Commander 2024.

The chart below provides an overview of the performance. We build an operation speed comparison of the basic features between GstarCAD and ARES Commander. To make sure the data validation, same operations will be tested three times and get the average value.

Operation Time Comparison between GstarCAD 2024 and ARES Commander 2024 (Unit: Second)

Testing environment:

WIN10 Education 22H2 64bit; 16G storage; CPU: 11th Gen Intel(R)Core(TM) i7-1165G7＠ 2.80GHz; Graphic Card: Intel(R) Iris(R) Xe Graphics NVIDIA GeForce MX450

Drawing Size: 48 MB and 114 MB

● We tested **the** operations with two 48MB and 114MB drawings, and got the average time.
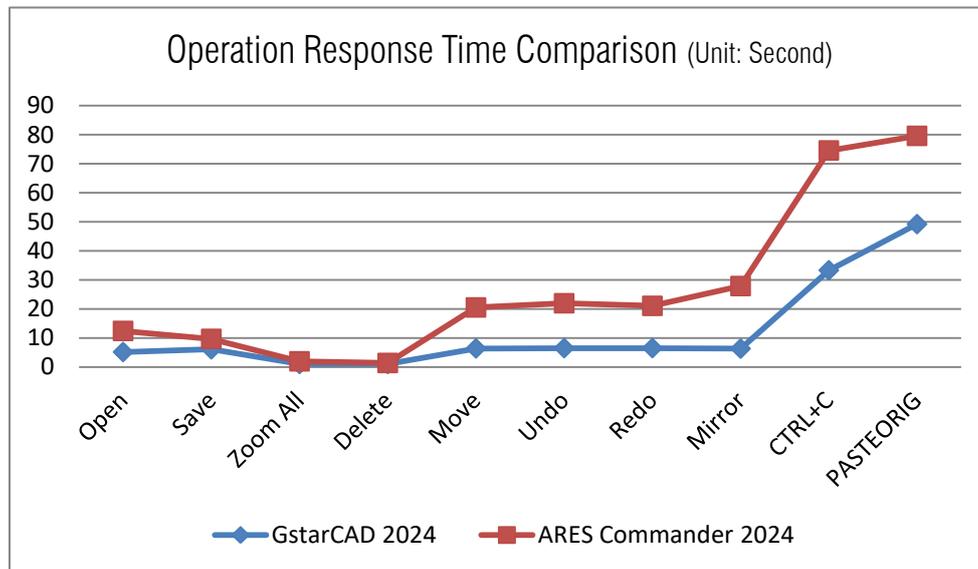
When executing Mirror, Ctrl＋C and paste to original in ARES Commander, the operation time is much slower than GstarCAD.

It's obvious that GstarCAD 2024 is faster than ARES Commander for the frequently used commands.From the comparison data above, we get the conclusion that GstarCAD provides a better performance to enhance your working speed.

4. Function Comparison

4.1. Comparison Table

Comparing with GstarCAD 2024, ARES Commander lacks of many important functions such as free scale, shortcut customization, match properties across drawings and so on.

Key Function Comparison Table between GstarCAD 2024 and ARES Commander 2024:

Features	GstarCAD	ARES Commander	Description
3DFORBIT	√	×	Rotates the view in 3D space with constraining roll.
AutoCAD Tool Palettes Import Tool	√	×	Import AutoCAD® customized Tool palettes in the WINDOWS Start menu easily.
ADDSELECTED Command	√	×	Creates a new object of the same type and general properties as a selected object with different geometric values.
ATTIPEDIT	√	√	Edits the attribute text in the block attribute in-place.
Break Point Check (CLOSELINE)	√	×	Marks unclosed endpoints among selected lines, polylines or arcs, and close them immediately.
CLIPIT	√	×	Clips images, xrefs, wipeout, or specified parts of block objects using circles, arcs, ellipses, or text as boundaries.
Constraints	×	√	Supports geometric and dimensional constraint.
CONVTOMESH Command	√	×	Optimizes 2D polyline and associated hatches in early versions.
CONVTONURBS Command	√	×	Converts eligible 3D objects into meshes.
CONVTOSOLID Command	√	×	Converts 3D solids and surfaces into NURBS surfaces.
CONVTOSURFACE Command	√	×	Converts eligible objects into 3D entities.

COPYLINK	√	√	Copies the current view to the Clipboard for linking to other OLE applications.
Draw order by color (CDORDER)	√	√	Arranges the drawing order of selected objects by their color number.
Data Extraction (DATAEXTRACTION)	√	√	Extracts drawing data.
Digital Signature	√	√	Attaches a digital signature to a drawing.
Batch Digital Signing Tool	√	×	Batch digital signatures for DWFX, DWG, DWT and other files through an independent Batch Digital Signing Tool.
Data Link (DATALINK)	√	√	Displays the "Data Link Manager" dialog box.
DWG Convert	√	×	Converts drawing format version for selected drawing files.
Fast Select (FASTSEL command)	√	×	Selects the object that touches the specified object.
Gradient Hatch	√	√	Supports Gradient Hatch color
Hatch to Back	√	√	Sets the draw order for all hatches in the drawing to be behind all other objects.
HP\OCE\Cannon built-in	√	×	Supports the build-in HP\OCE\Cannon driver.
Layer Merge (LAYMRG)	√	√	Merges specified layer to target layer and delete previous one.
Layer Translator (LAYTRANS)	√	×	Changes the current layer to specified layer standard.
Layer Walk (LAYWALK)	√	√	Displays objects on selected layers and hides objects on other layers.
Merge Layout (LAYOUTMERGE)	√	√	Two or more layouts in one drawing can be merged into a specified layout.
Make Shape (MKSHAPE)	√	√	Creates a shape definition based on selected objects.

Match Properties Across Drawings	√	×	Matches properties across drawings.
Password Protection	√	×	Sets password for specified drawing file to lock it.
Point Cloud Attach	√	×	Inserts a point cloud scan (RCS) or project file (RCP) into the current drawing.
Quick Properties	√	×	A set of objects properties displayed through the Properties Palette which allows you to customize.
Reverse	√	×	Reverses the vertices of selected lines, polylines, splines, and helixes.
Section Plane	√	×	Creates sections of 3D object by creating section planes.
SELECTIONCYCLING	√	√	Controls the display option associated with overlapped objects and cycling selection.
Solprof	√	×	Creates a 2D profile of 3D solids and display it in a layout viewport.
Solview	√	×	Creates orthogonal views, layers, and layout viewports automatically for 3D solids.
Soldraw	√	×	Generates profiles and sections in layout viewports.
Superhatch (SUPERHATCH)	√	√	Fills an enclosed area or selected objects with a hatch pattern, solid fill or gradient hatch.
SURFOFFSET Command	√	×	Creates a parallel surface at a specified distance from the original surface.
Synchronize Viewports (VPSYNC)	√	√	Synchronizes one or more layout viewports to a master layout viewport to have the exact locations matched up.
System Variable Monitor (SYSVARMONITOR)	√	×	Monitors system variables in the list and sends notifications to alert users when system variables and the reported preferred values change.
Text Align / Text Match	√	×	Aligns multiple text objects vertically, horizontally, or obliquely. Matches both text and Mtext

			attributes text, such as color, font, height, alignment, angle, and matches the content and layer.
Viewport Scale (VPSCALE)	√	√	Displays the scale of the current viewport or of a selected layout viewport.
Visual Styles Manager	√	×	Creates and modifies visual styles.
Voice Note	×	√	Lets you record audio notes and embed them in drawings.
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From the commonly used functions comparison table above, you can see GstarCAD provides richer functions than ARES Commander.

4.2. GstarCAD Innovative Features

GstarCAD has customized a large number of unique functions according to user needs.

The innovative features of GstarCAD:

GstarCAD Innovative Features

Features	Description
Align Tool (ALIGNTOOL)	Allows you to align the selected objects along the X or Y axis coordinates.
ACAD Tool Palettes Import Tool	Import AutoCAD© customized Tool palettes in the WINDOWS Start menu easily.
Area Sum (AREASUM)	Displays the current closed region value and area sum sequence in command line.
Area Table (AREATABLE)	Dimensions and counts the area of an enclosed object and exports the result to a table in the current drawing area.
Arrange Tool (ARRANGETOOL)	Aligns multiple objects left, right, top, bottom, center, vertical or laterally.
Attribute Increment (ATTINC)	Attributes values increment automatically or manually according to specified method.
Auto Layer (AUTOLAYER)	Customizes and predefines the associated layer of a command to streamline drafting workflow.
AUTOXLSTABLE	Allows to insert excel, and static block quantity, area and length and auto update the data according to the changes of the object.
Barcode (BARCODE)	Allows inserting the barcode to objects to corresponding paper documents and electronic drawing file.
Batch Print(BP)	Batch prints the drawing frames by pages.
Batch Purge (BATPURGE)	Batch purges the redundant blocks, layers, linetype, dimensions and text, etc in drawings.
Block Break (BLOCKBREAK)	Allows you to wipeout or break an object that is overlapped by a reference block.
Break Object (BREAKOBJECT)	Breaks the intersected lines and allows you to set the gap value.
CAD table to EXCEL (GC_CTE)	Converts sheets, composed by line/Spline and text/Mtext in CAD, to EXCEL.
Change Base (CHANGEBASE)	Modifies the base point position of the block.
Change Text (CHANGETEXT)	Modifies several texts simultaneously.
CIRCLE(C) Parameter	CIRCLE(C) parameter; Draws multiple concentric circles with one radius.
Collaboration	The GstarCAD Collaboration Tool is an embedded plugin available for GstarCAD platform aimed to help CAD designers work together among

	a single referenced drawing file at the same time, control drawing revisions and manage medium, big or complex projects with ease and reliability, reducing communication barriers across different industries.
Define Layout Viewport from Model Space(M2LVPORT)	Creates a viewport on layout space by selecting objects in the model space.
Dimension Coordinate (DIMCORD)	Marks X, Y coordinate values of the point.
Distance from Endpoint Snap	Allows to sap a certain distance from any endpoint of objects and the distance value can be modified at status bar at any time.
Divide Segments Snap	Allows snap the divided segment points of objects and the divided segment number can be modified at any time.
Export Coordinate (COEXPORT)	Exports the coordinate of the picking point to txt or xls files.
FILLET(I) Invert Parameter	Creates a reverse fillet by this option.
Frame Automatically (FRAMEAR)	Automatically searches for the frame, calculates according to the frame size, and arranges multiple drawings on a large-format drawing reasonably.
Free Scale (FREESCALE)	Scales an object without restrictions under three modes; Non-Uniform, Rectangle and Free.
Freeze Other Layer (LAYFRZOTHER)	Freezes other layers except the layer where the selected object is located.
Graphic Compare (OCMP)	Compares graphic of two groups of objects or two files.
GstarCAD tools (12 functions)	Allows you to quickly draw the industry drawings with GstarCAD tools
Import HPGL/2 (IMPORTHPGL)	Imports a PLT files.
Get Selection by Block Name (GETBLKSEL)	Multi-selects objects with the same name in specified area.
Get Selection by Object Type (GETENTSEL)	Multi-selects objects with the same entity type in specified area.
Get Selection by Layer (GETLAYSEL)	Selects all the objects in specified layer and specified region at one time.
Get Selection by Color (GETCOLSEL)	Quick selects the objects with the same color.
Get Selection by Object/Layer (GETENTLAYSEL)	Selects entities by entity type and layer.
Get Selection by Object/Color (GETENTCOLSEL)	Selects entities by entity type and color.
Get Selection by Layer/Color (GETLAYCOLSEL)	Selects entities by color and layer.
Dimension Coordinate Position	Dimensions the coordinate position.

(HCZZBD)	
Layer Draw Order (LAYDRAWORDER)	Changes the order of the layers by bringing to front or sending to back.
Lock Other Layers (LAYLCKOTHER)	Locks other layers except the layer where the selected object is located.
Layer Unlock All (LAYULKALL)	Unlocks all layers.
Off Other Layers (LAYOFFOTHER)	Turns off other layers except the layer where the selected object is located.
Magnifier (MAGNIFIER)	Views a specific area of your drawing as a magnifier with the capability of snap points without performing zoom in/out on big drawings.
OFFSET(B) Both Sides	Offsets to both sides, no need to operate twice.
Outline (OUTLINE)	Generates the outline by clicking the closed region.
Pline Boolean (GC_BOOLOP)	Operates the closed pline with union, intersection and subtraction.
Print PLT(PRINTPLT)	Prints the generated PLT file.
QR Code(QRCODE)	Extracts data or inputs data to generate QRcode which can be scanned by mobile device to obtain data.
Rapid Distance (RAPIDDIST)	Measures distance and angle between 2D objects along X, Y axis rapidly by moving mouse.
RECTANGLE(O) Parameter	RECTANGLE(O) parameter, Draws an rotate rectangle with (O)option
Region Scale (REGSCALE)	Selects a region of a drawing to be cut and copied to a new location.
ROTATE(Multiple)Parameter	Copies many objects with different rotate angles, or draw circles array.
Shortcut Customization (CUSTACC)	Customizes the shortcut key.
Spline to Pline (Sptpl)	Converts spline to polyline according to the accuracy (number of segments of the arc) that the user assigns.
Statistics Summation (KLL01)	Sums up the selected text or Mtext.
Symmetric Draw	Directly draws symmetrical shapes, it can omit the operation of the mirror.
Text Incremental Copy (GC_dztext)	Accomplishes kinds of incremental methods for text.
Text Align (TEXTALIGN)	Aligns text along X or Y coordinates, or along a line of specific direction.
Text Match (TEXTMATCH)	Matches both text and Mtext attributes in the current drawing, avoiding select and edit text attributes one by one.

Text Online (TEXTONLINE)	Distributes the text uniformly along a selected spline, polyline or arc. It can also create text online quickly for multiple curves.
Total Length (MEASUREGEOM)	Inquire total length of the selected lines.
WIPEOUT (supports circle and arc)	Generates wipeout by clicking circle or a pline object contains arcs.
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Besides developing plenty of innovative features, GstarCAD has improved the basic operations in order to simplify the operation steps. For example, Adds the angle parameter to line and spline, when drawing an object, you can not only set the value between object and X axis, but also set the angle parameter between the selected line and the previous line; Adds the concentric circle and rotated rectangle; Adds multiple copies in rotate command, realize the copy rotate and circle array; Adds divided by segment and distance from endpoint, layout by path, etc. to accomplish the liner array. Supports invert fillet option in fillet command which is welcomed by designers.

The innovative features enhance your drawing efficiency greatly.

4.3. Function Detail Comparison

GstarCAD 2024 not only has more commands than ARES Commander, it is also better in the details of some interfaces and functions. The following is a comparison of important functions.

- Hatch Patterns

GstarCAD provides rich hatch patterns for users to meet more requirements. ARES Commander offers few hatch patterns.
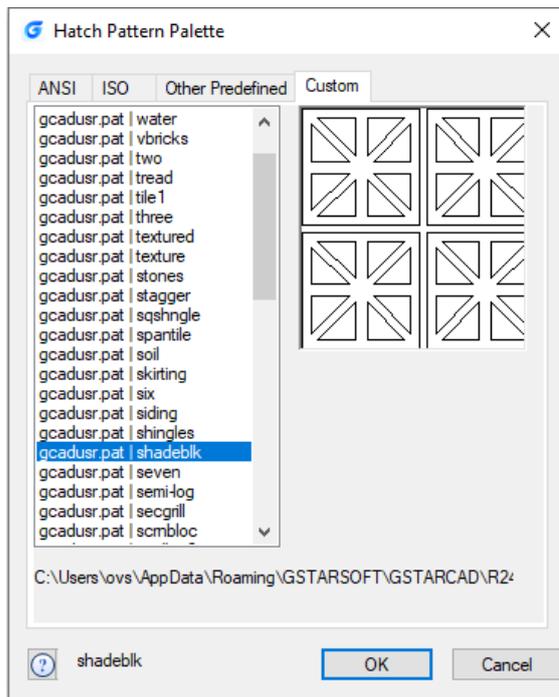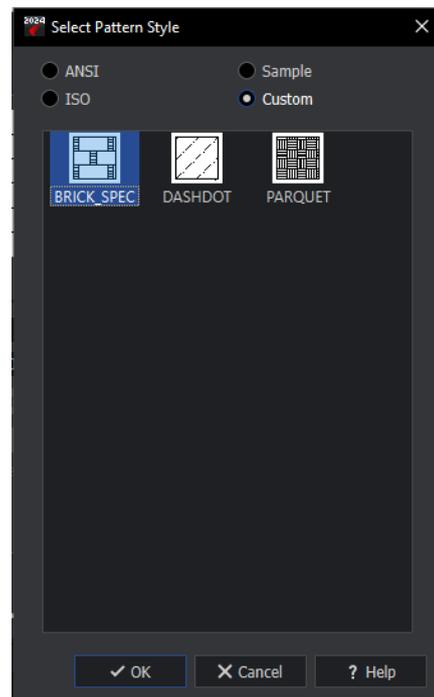
GstarCAD	ARES Commander

- Hatch Pattern Background and line Color

GstarCAD supports to change the hatch background and line color which meets different user's preference.

ARES Command 2024 doesn't support changing the background and line color for hatch.
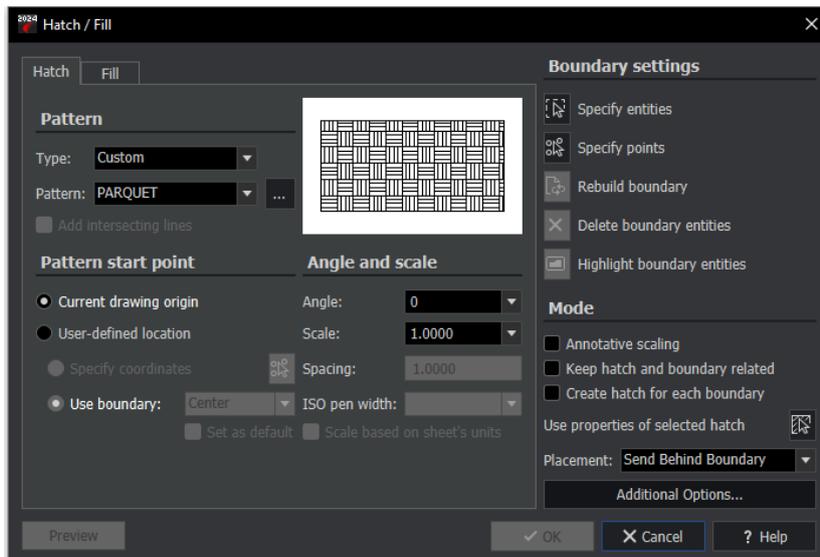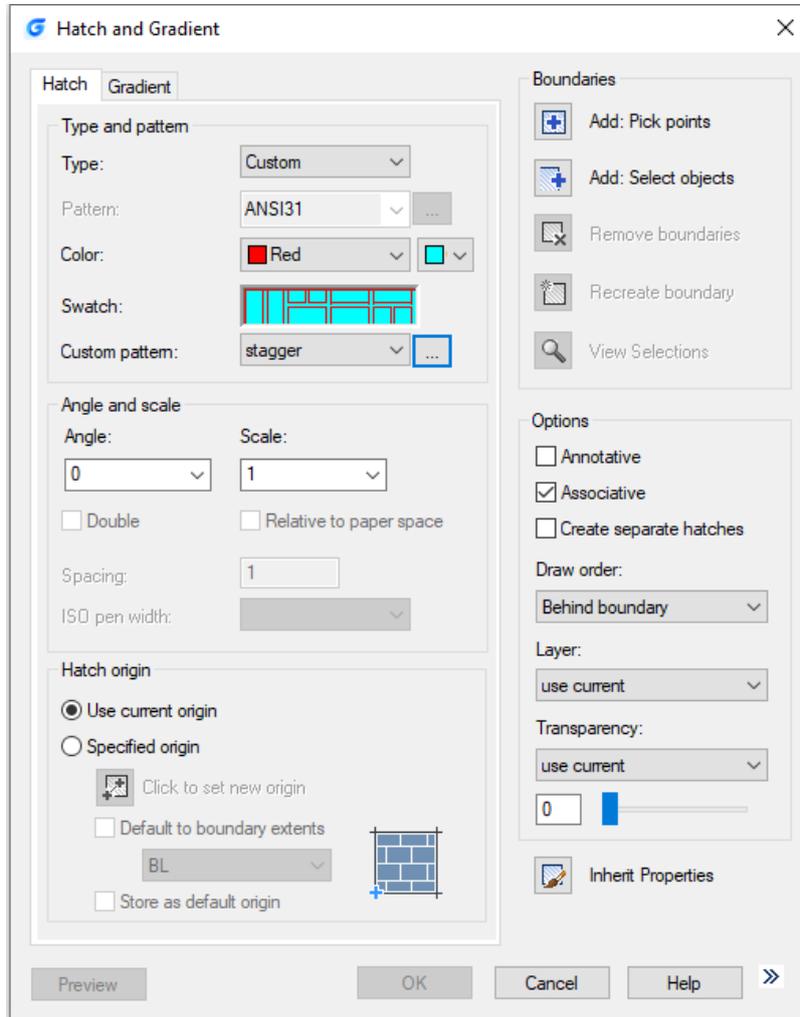
● Color Books

When assigning colors to objects, you can choose colors from color books in GstarCAD.
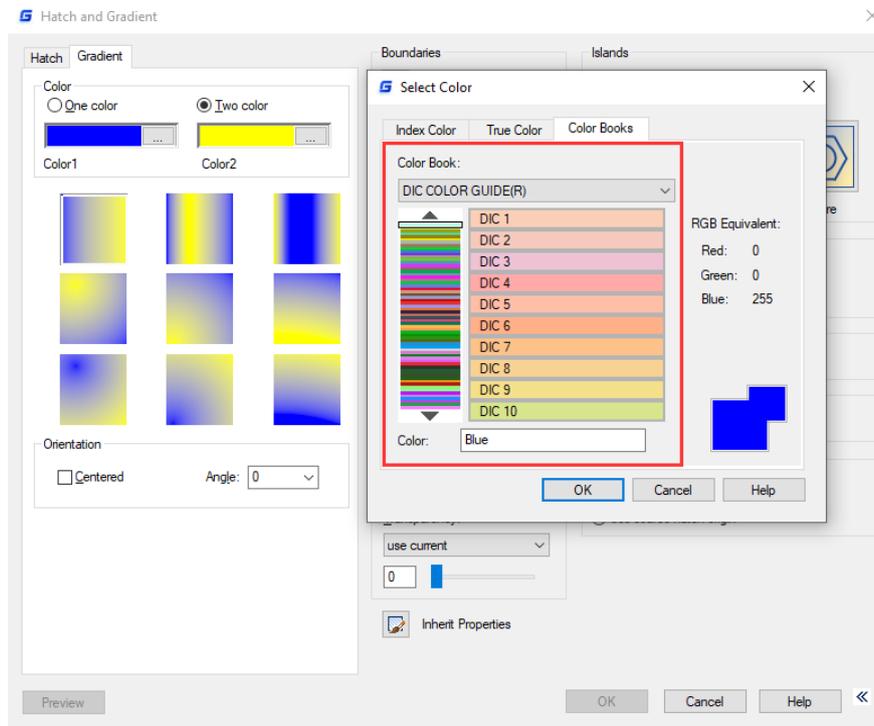
ARES Commander only supports the basic colors.
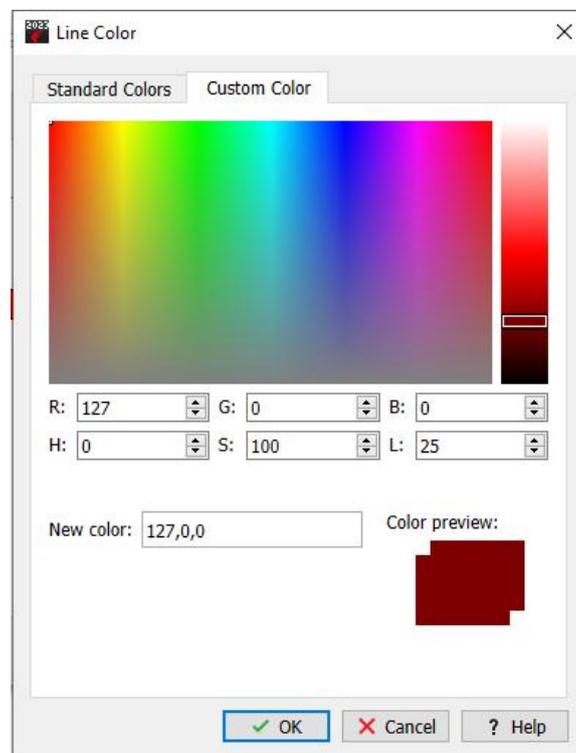
- **Quick Access Toolbar**

In GstarCAD, the commands displayed in the quick access toolbar can be customized directly in the drop-down menu and more commands can be added, and can be set to display below the ribbon.

What's more, you can add to or delete the command from the quick access toolbar by right clicking the command icon.
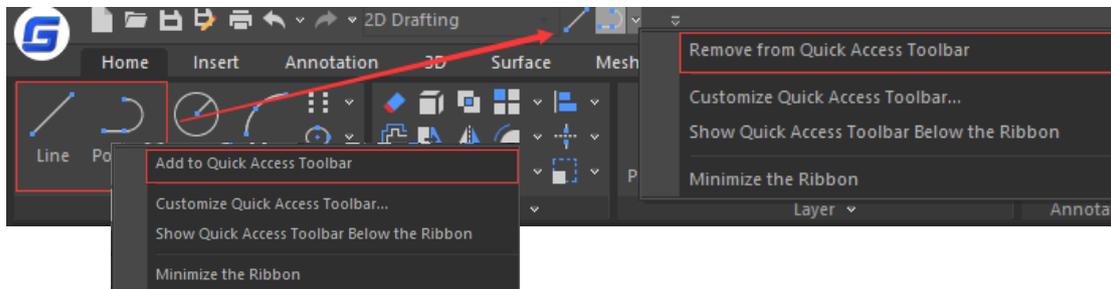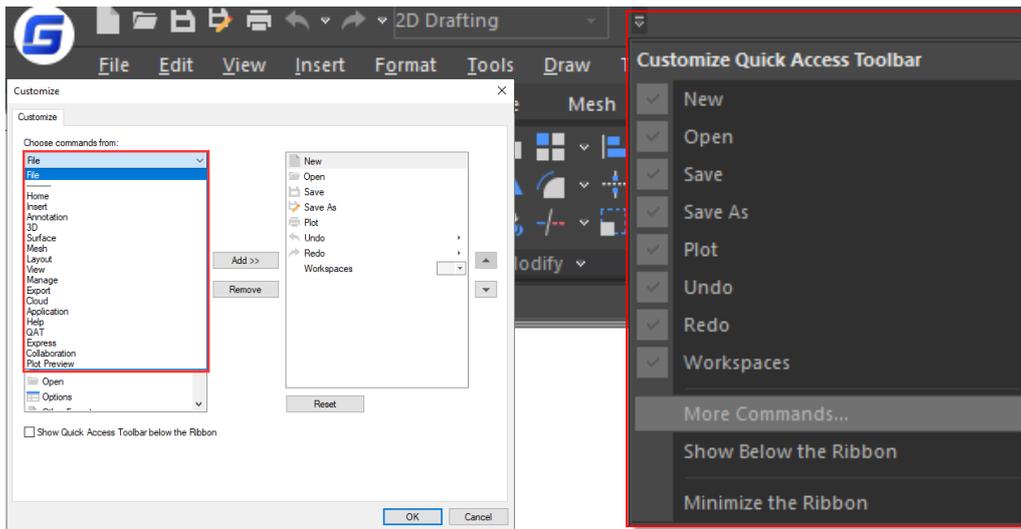
ARES Commander does not support as many commands as GstarCAD in customized quick access toolbar, only the default commands are able to choose. ARES Commander does not support display the quick access toolbar below the ribbon.
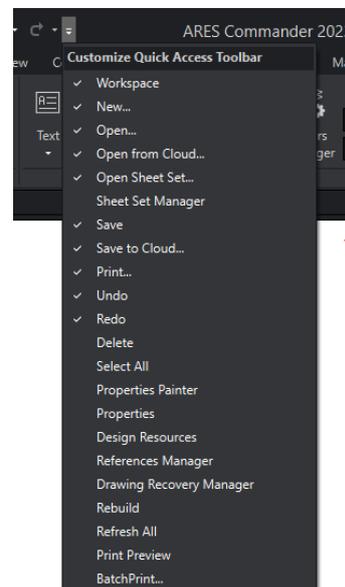
- **The Grid**

The grid helps align objects and visualize the distances between them. GstarCAD provides two grid modes to bring better user experience.
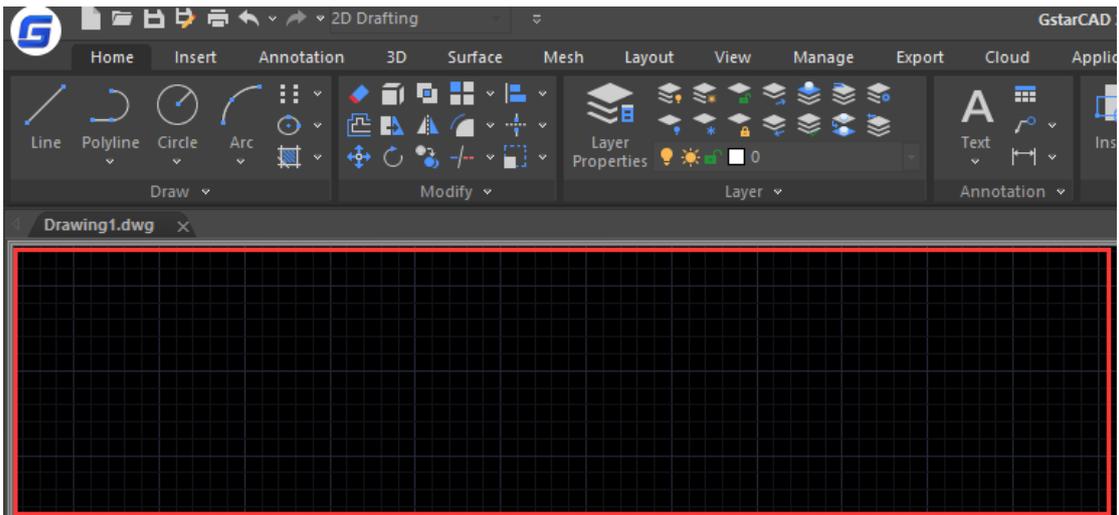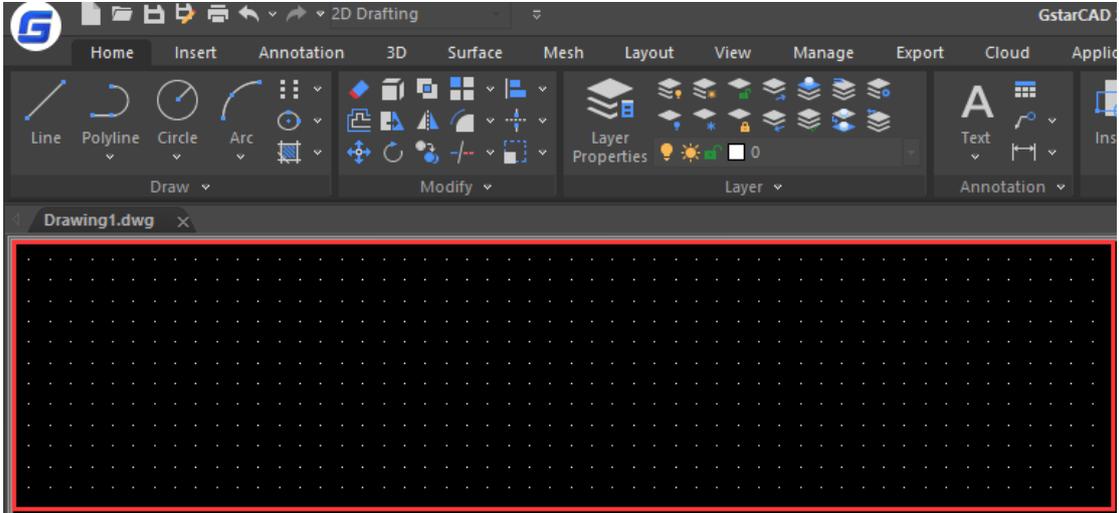
ARES Commander only supports the traditional spot grid.
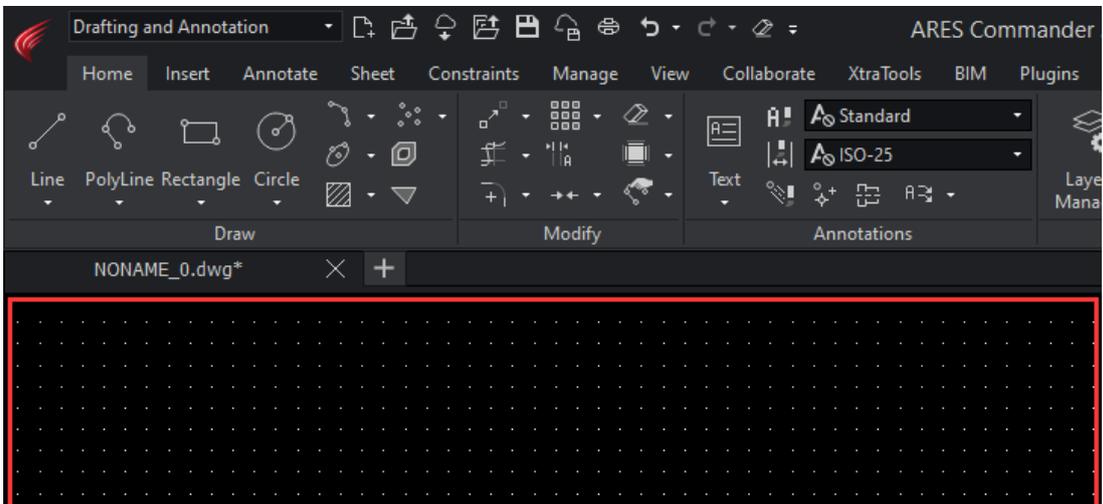
- **Tool Palettes**

GstarCAD supports tool palettes that are tabbed areas within the Tool Palettes window. You can create a tool by dragging an object onto the tool palette. Blocks and external references (xrefs) can be dragged onto the tool palette.

You can also hatch objects with hatch patterns from tool palettes by clicking and moving the mouse on the object. You can easily modify the properties of the hatch patterns as well.
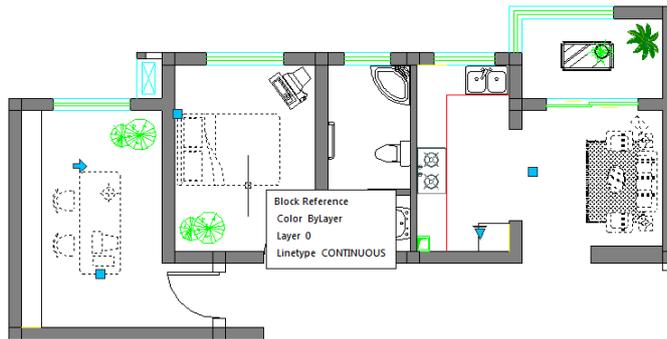
GstarCAD

However, ARES Commander supports less tools in Toolpalettes.
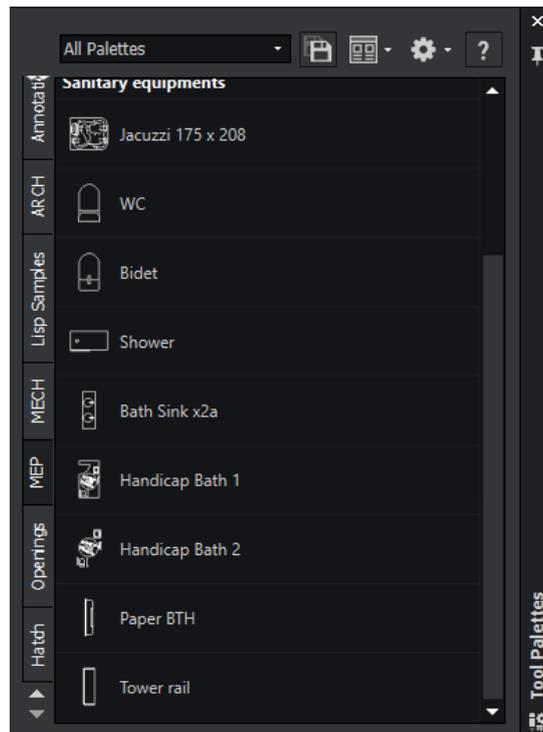
- **Array Panel**

GstarCAD array options provide dynamic adjustments to the number of ranks, spacing and other related parameters through Ribbon Panel, Properties and Grip.
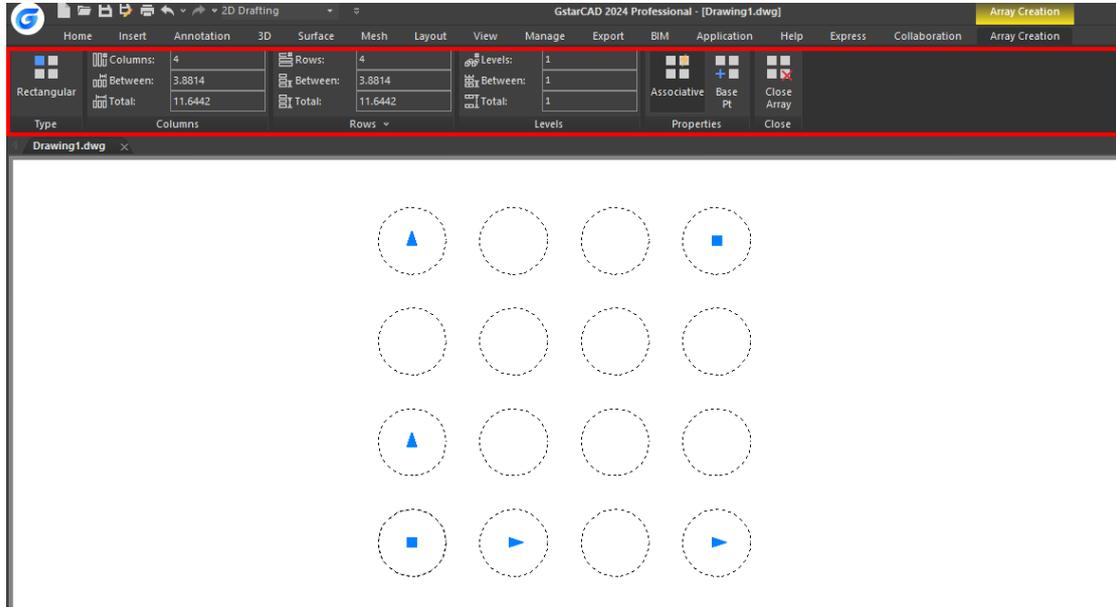
ARES Commander does not support Array Ribbon Panel which means that it doesn't support dynamic editing of array parameters. You have to double click the arrayed objects to edit.
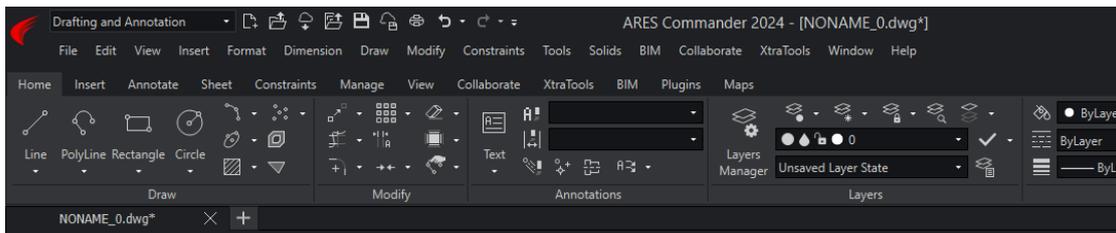
- **MEASUREGEOM (Sum Area and Total Length)**

GstarCAD not only supports the measure area and measure distance, but also supports measure radius, measure angle, measure volume, sum area and total length.
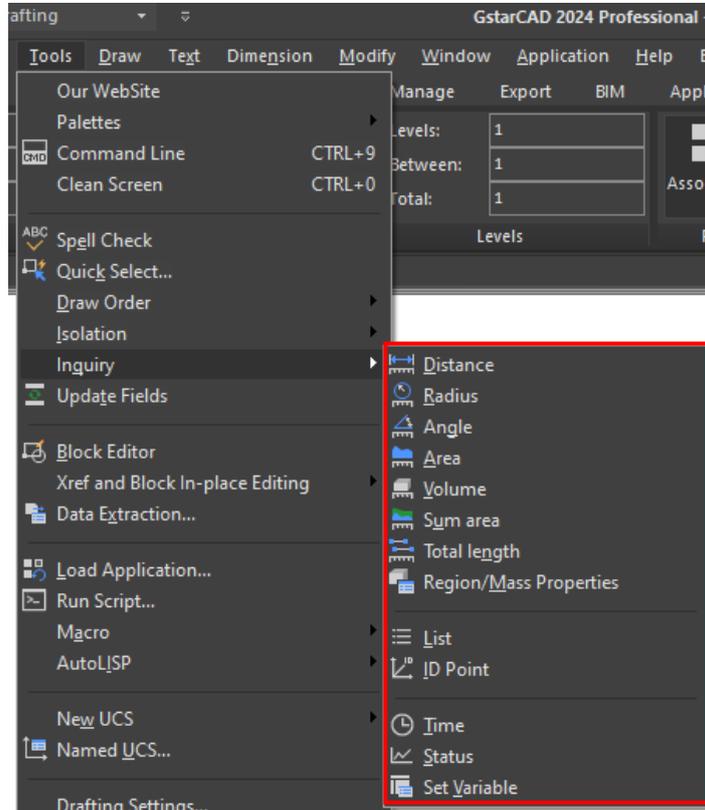
ARES Commander does not support volume, Sum area and Total Length, etc.
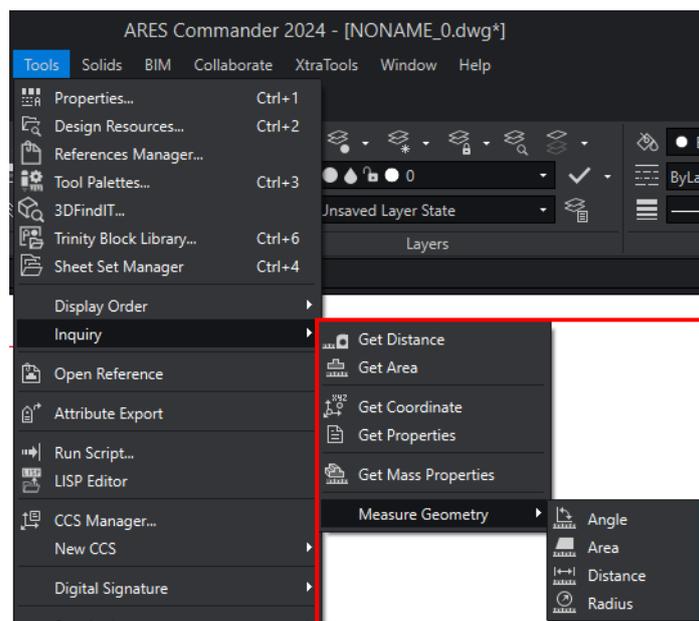
- **Hatch, Trim, Extend Preview**

GstarCAD supports preview effects when trimming, extending and hatching, which can help users judge the correctness of the operation.

ARES Commander does not support preview effects when trimming, extending, and hatching.
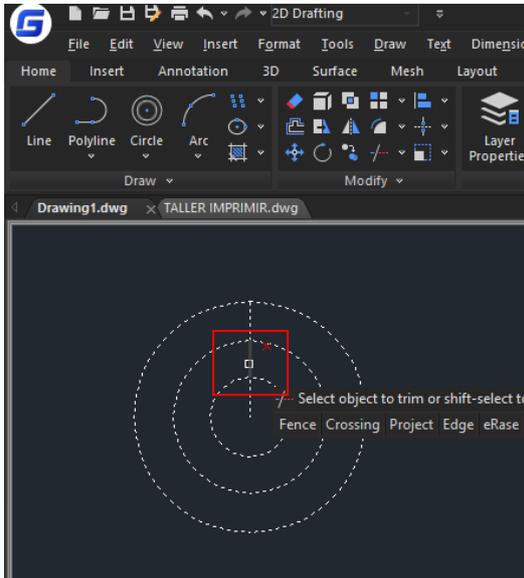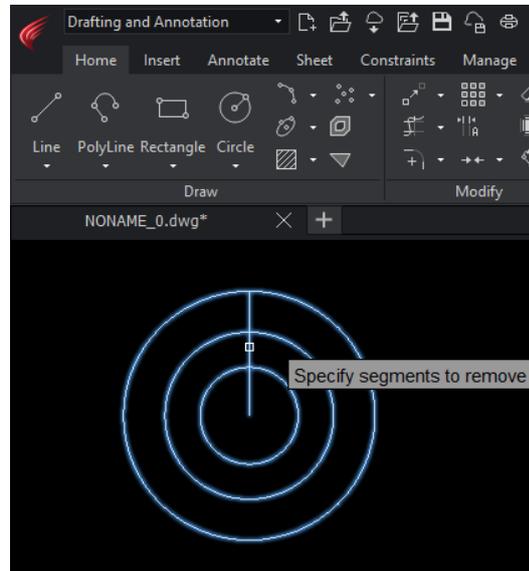
| GstarCAD | ARES Commander |

- **Line**

GstarCAD can set the reference angle or included angle with the reference object or the previous section when setting the angle.
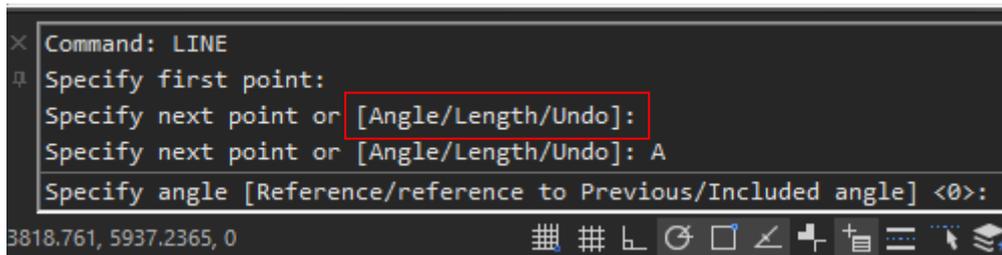
GstarCAD

ARES Commander does not support the options such as angle, length to assist you to draw the line.
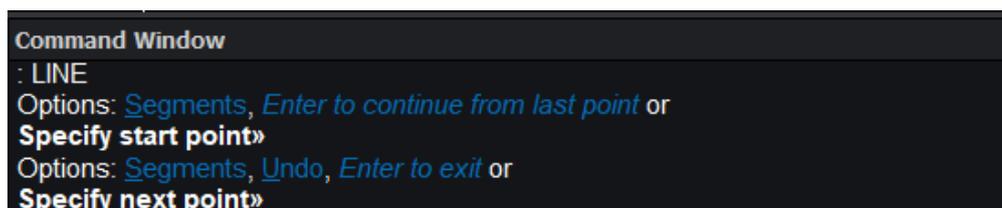
ARES Commander

- **Circle**

GstarCAD supports convert arcs to circles, multiple circles, and multiple concentric circles at one time.

However, ARES Commander only supports the basic options.
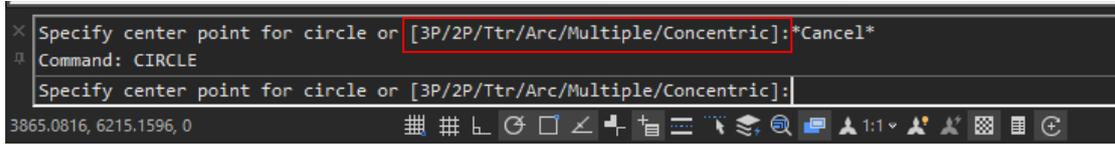
GstarCAD
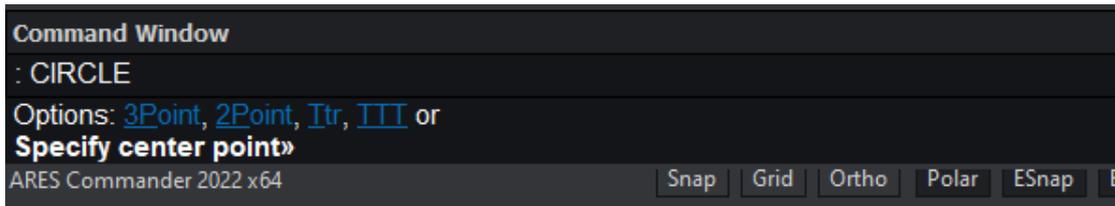
ARES Commander

- **Fillet**

GstarCAD can create the normal fillet and reverse fillet.
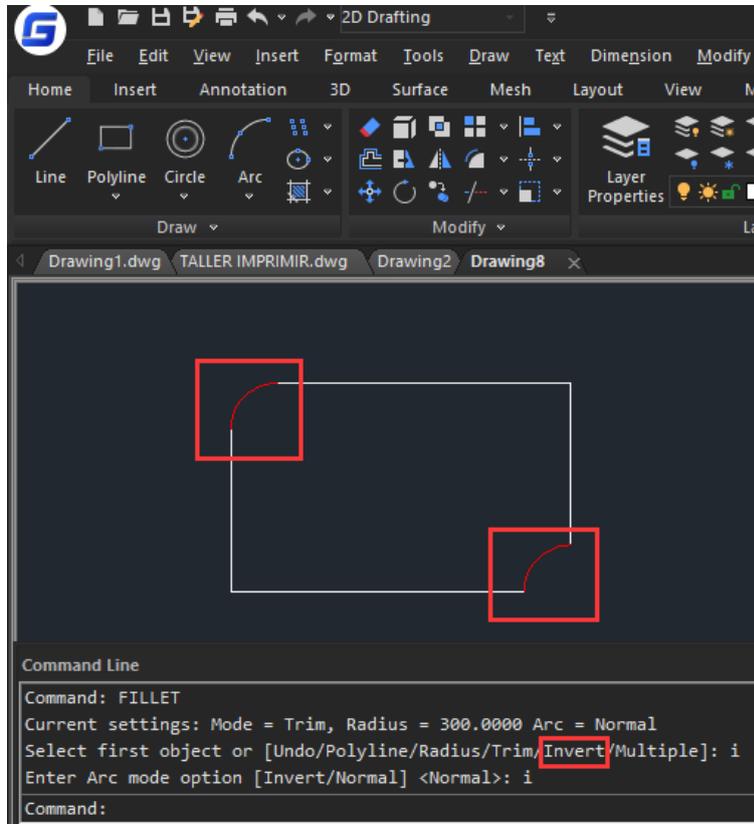
ARES Commander only supports the normal fillet.
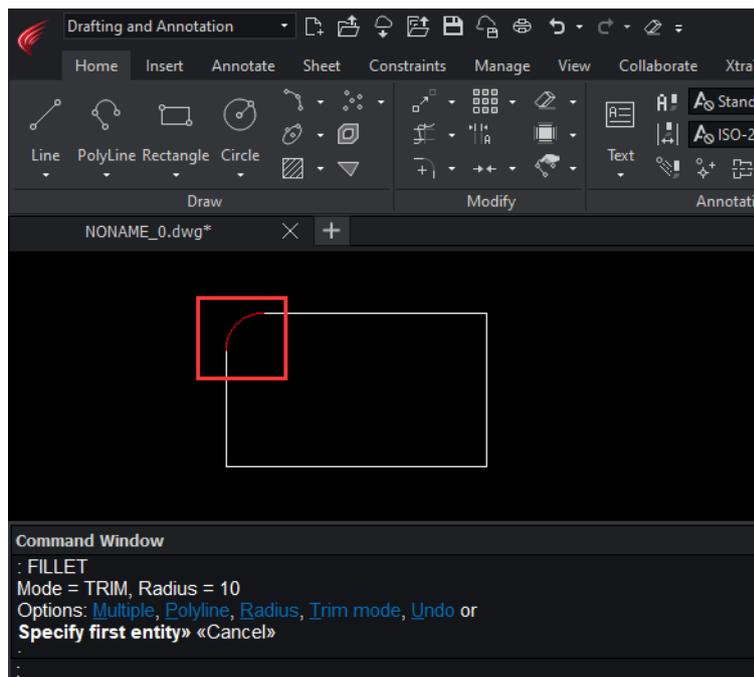
● Copy

GstarCAD provides three array modes for copy command: measure, divide and path which can be copied along

a straight line or curve.

GstarCAD

ARES Commander does not support the copy array modes.

ARES Commander

- Mtext

GstarCAD provides rich options in Mtext, such as columns, match text formatting, superscript /subscript, and supports the distribute paragraph alignment as well.
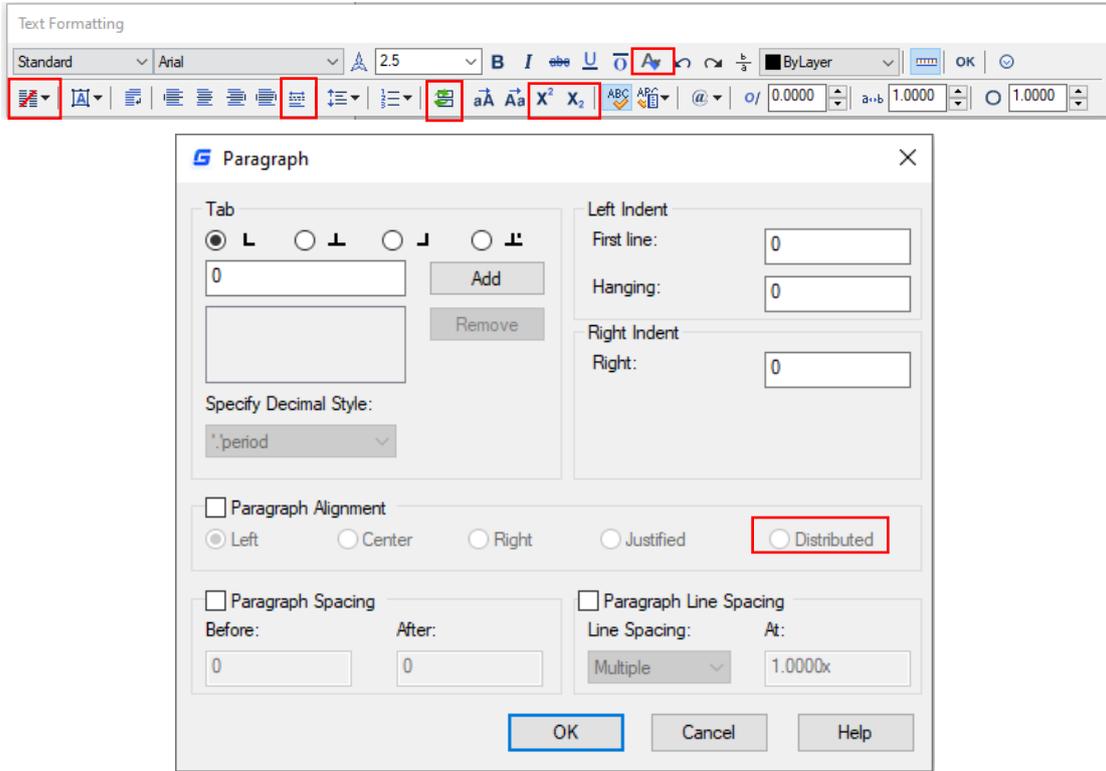
ARES Commander not only lacks these important functions, but also hides some of the frequently used options, such as the paragraph alignment, you have to click the drop-down list to choose, which reduces the operation speed.
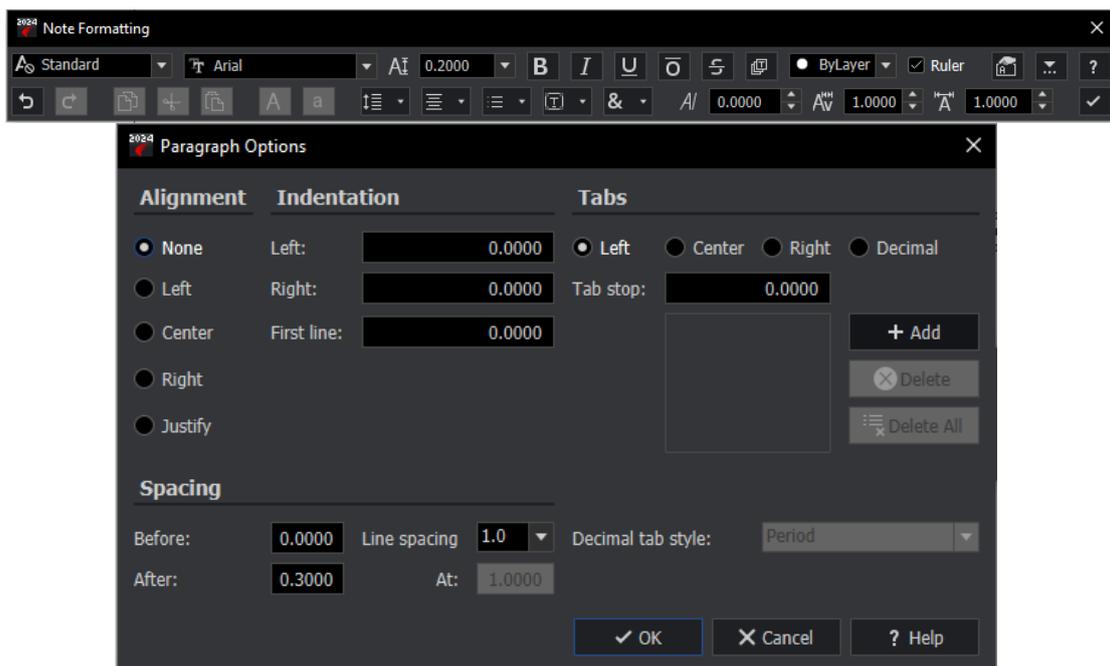
- **Snap Options**

GstarCAD supports Distance from Endpoint and Divide Segments snap options and provides you more concise interface.
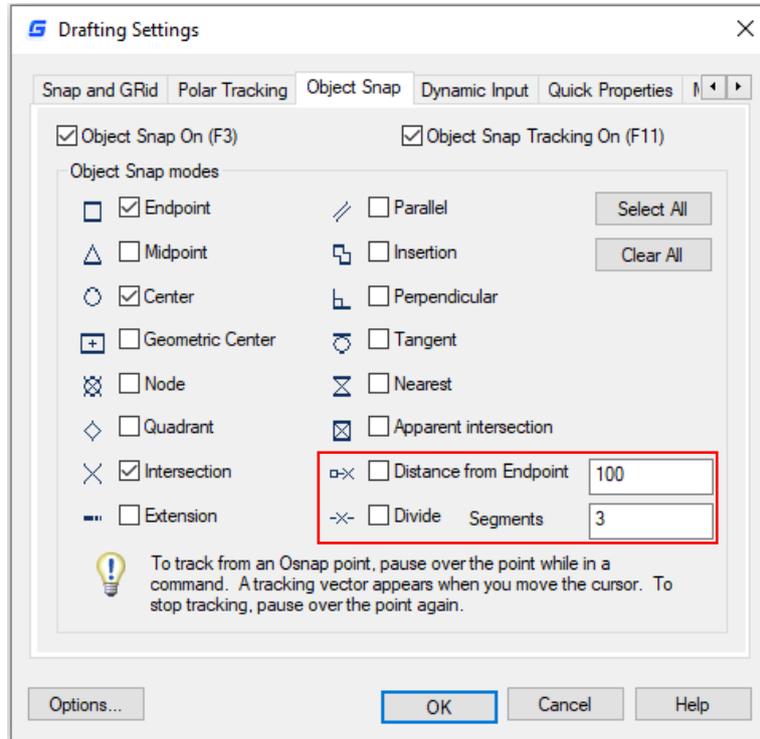
ARES Commander only provides conventional snap methods with the tree structure.
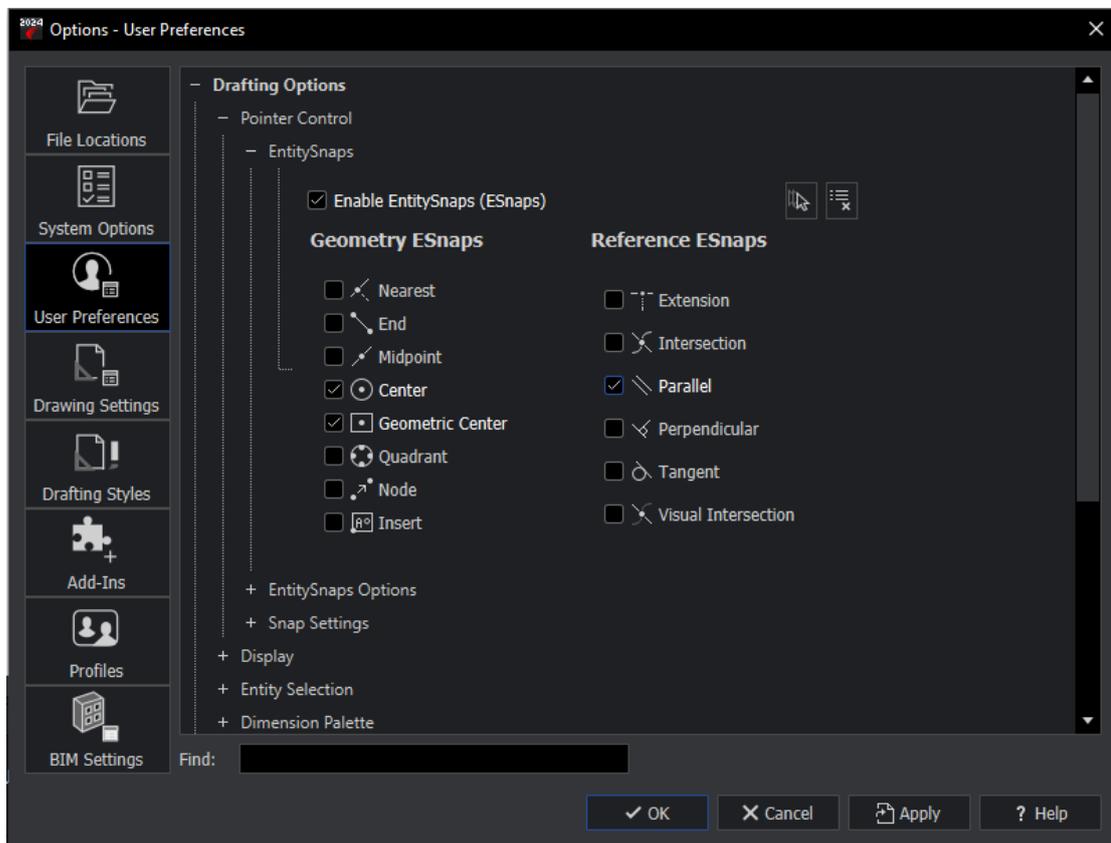
- **Context Menu for Object Snapping**

The snapping options are listed in the right-click menu of the object snap button in GstarCAD. You can adjust the snapping options without opening the draft settings dialog box.

However, you have to open the Draft Settings dialog box to set the fixed object snapping options in ARES Commander.
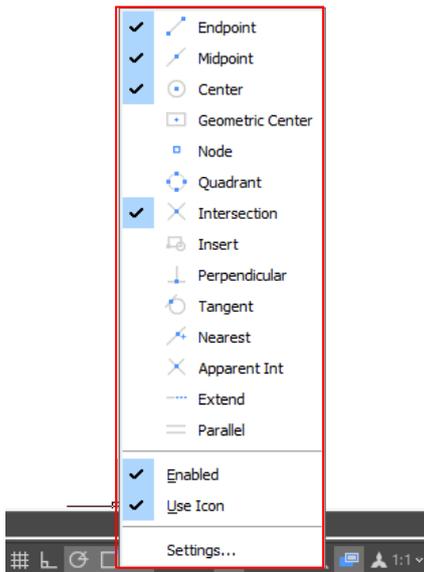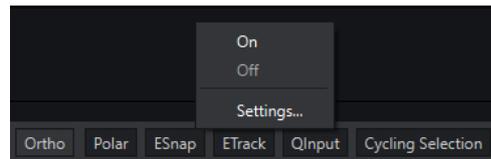
GstarCAD   ARES Commander

- **Context Menu for Polar Tracking**

GstarCAD provides commonly used polar axis incremental angles in the right-click menu, and users can directly select them in the menu without opening the draft setting dialog box.

However, you have to open the Draft Settings dialog box to choose options or set the incremental angles in ARES Commander.
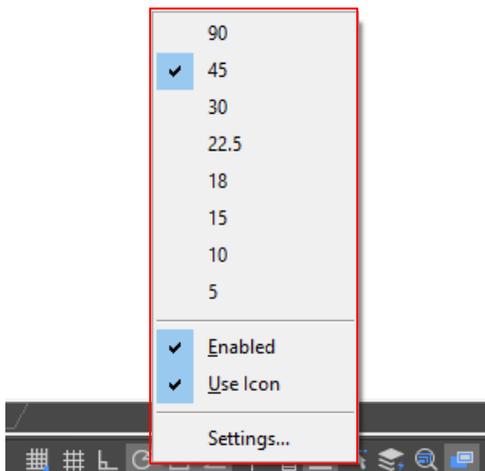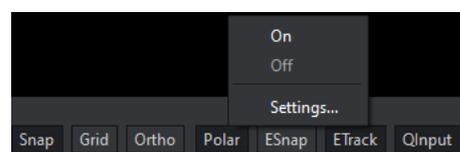
GstarCAD   ARES Commander

- **Hatch Edit Options in Context Menu**

GstarCAD supports more options such as set origin, set boundary and generate boundary when right clicking on the hatch objects.
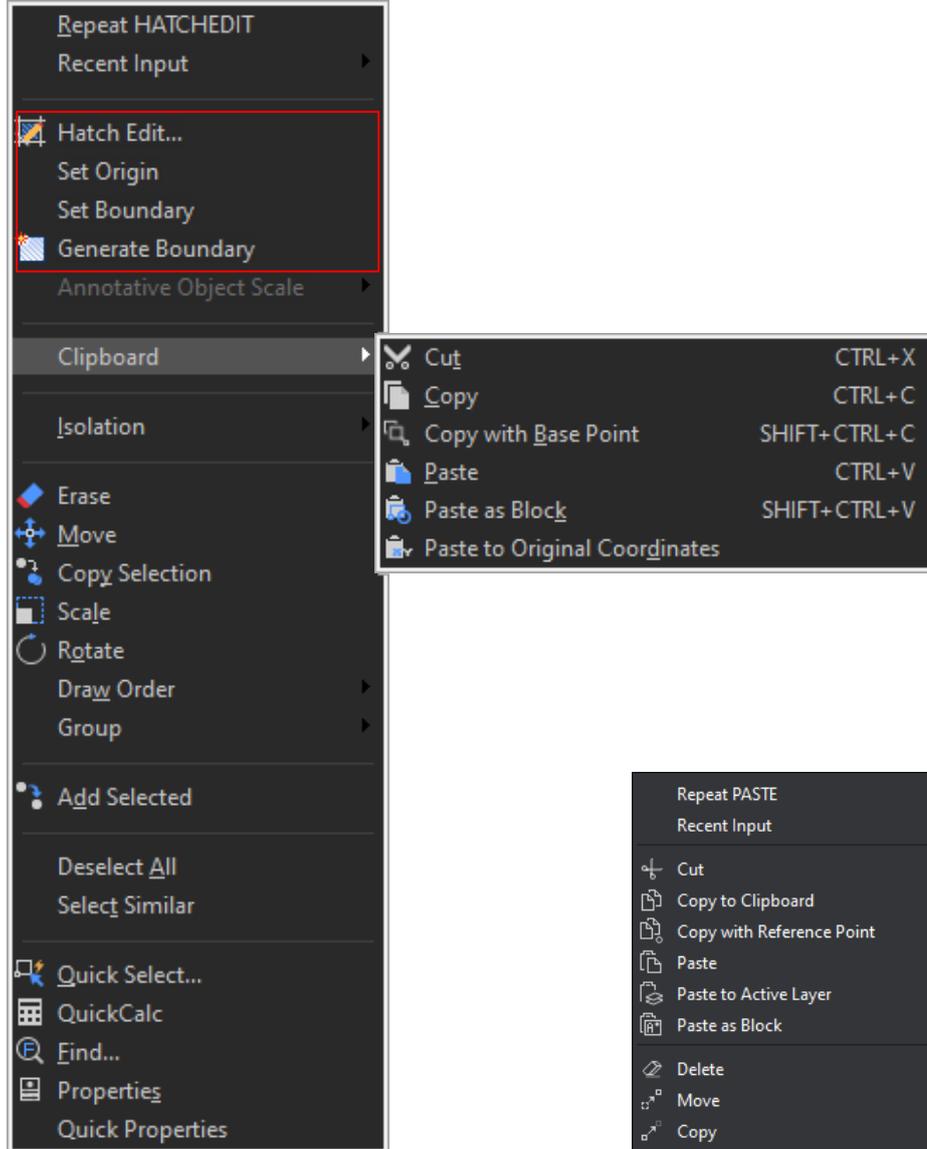
GstarCAD

ARES Commander does not support set origin, set boundary and generate boundary and so on.
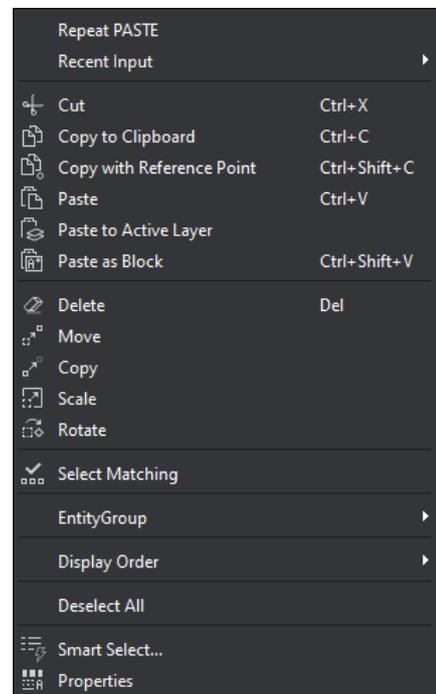
ARES Commander

- **Dimension Polygon Center**

GstarCAD supports the option Polygon(P) in DIMCENTER command to mark the center of polygons. While ARES Commander only supports dimension center of arc and circle, it does not support dimension polygon.
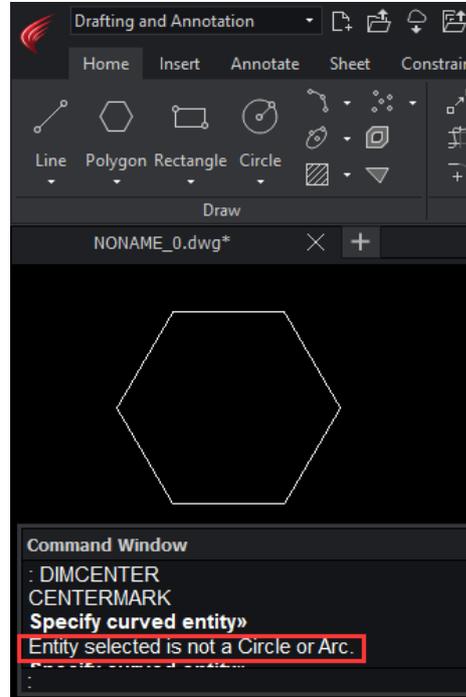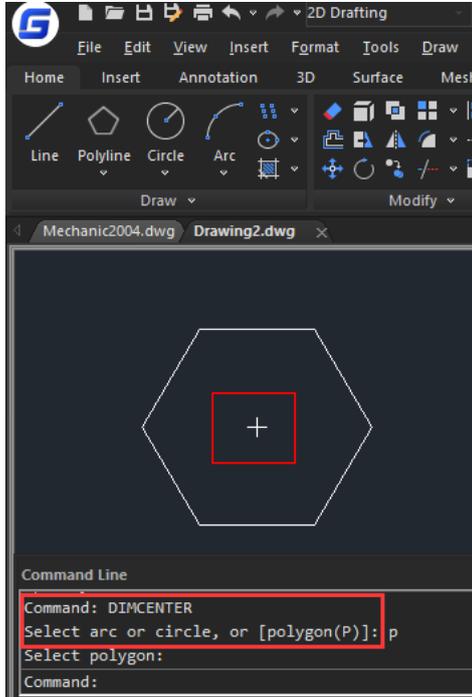
- **Stretch Dimension Group**

GstarCAD supports the "Stretch Dimension Group" option which allows adjusting dimensions that share same grips with each other as a whole.

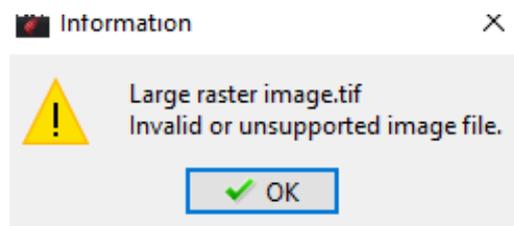In ARES Commander, you have to stretch such dimensions one by one, which wastes your design time.
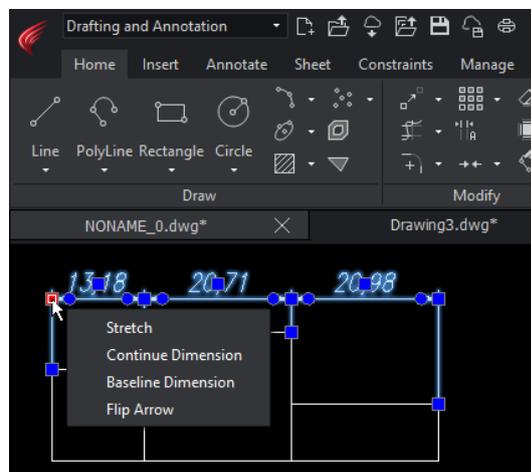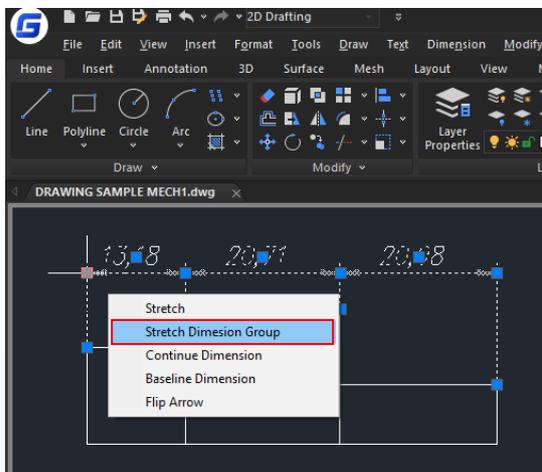
- **Large Raster Image Processing**

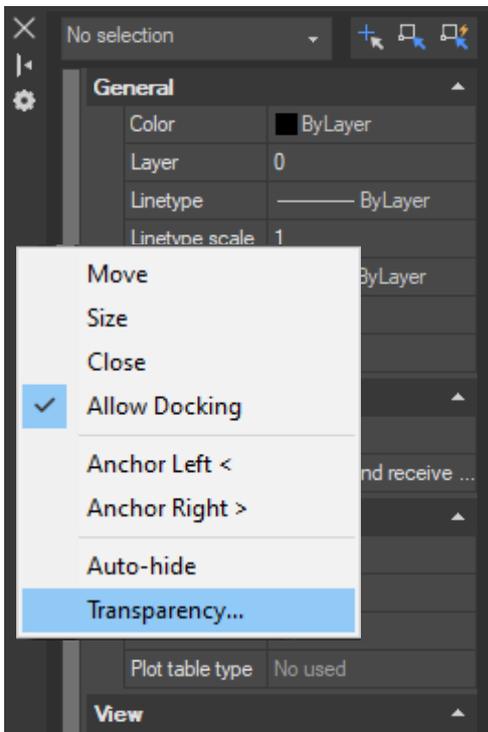GstarCAD is excellent in dealing with large raster image. While Ares Commander even couldn't open it.
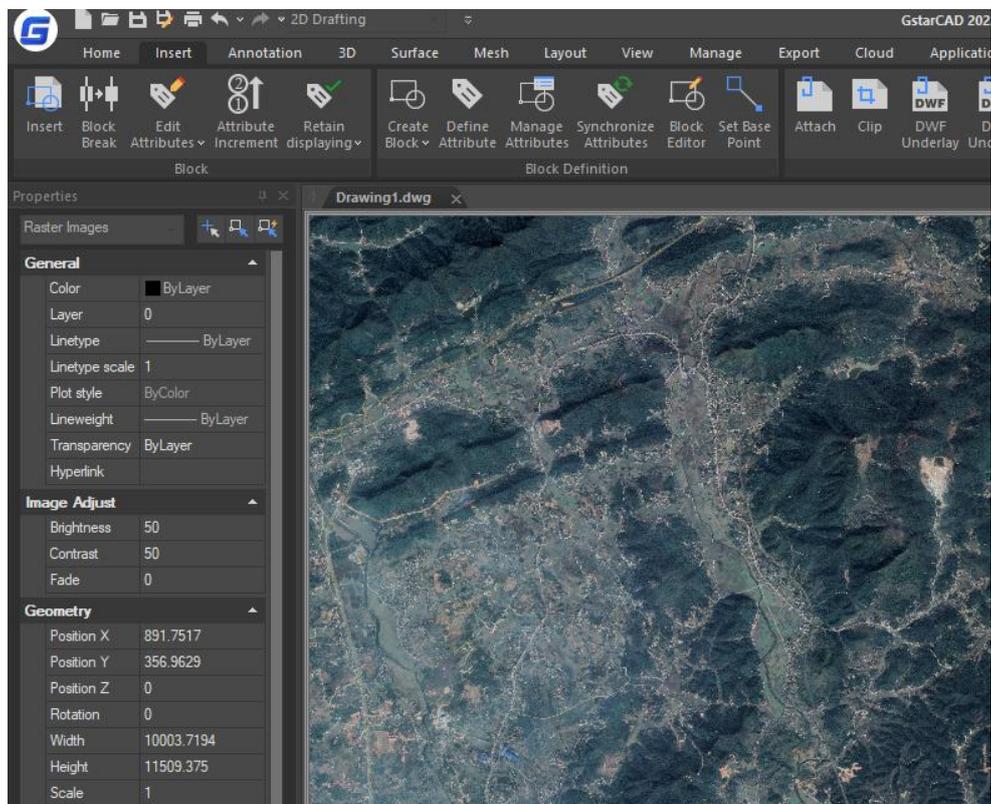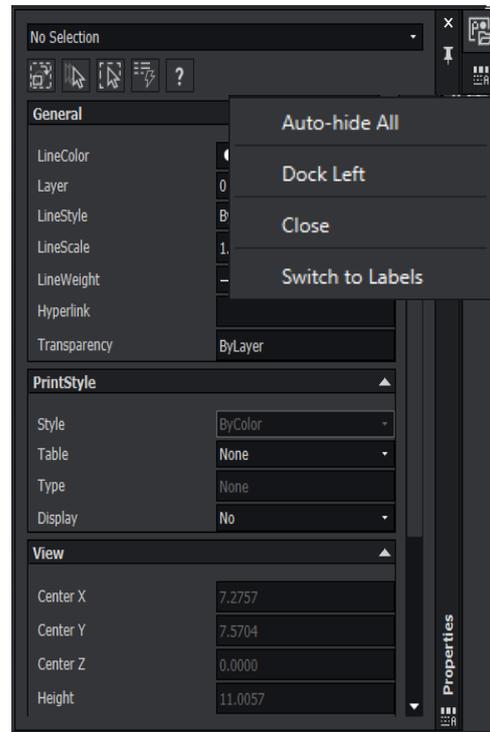

GstarCAD

ARES Commander

- **Transparency of the palettes**

GstarCAD supports adjusting the transparency of the palettes which ARES Commander does not support.
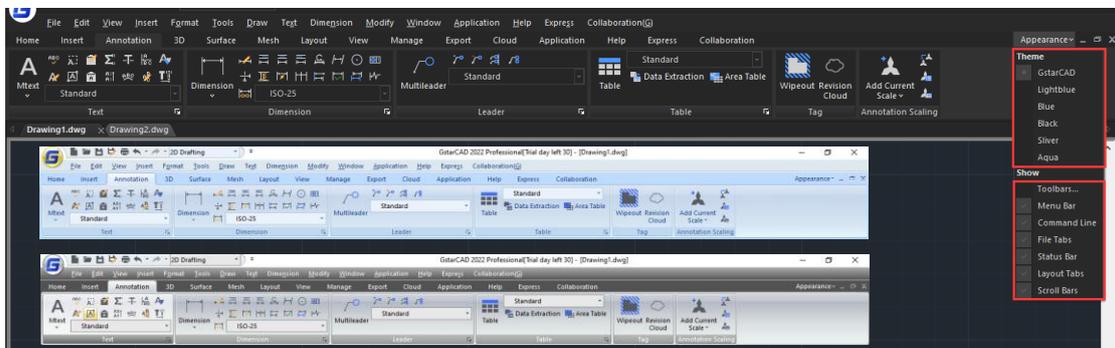

GstarCAD   ARES Commander

5. User Experience

5.1. Interface

GstarCAD offers you a concise and familiar interface. It provides 6 color themes in total, and the combination of attractive color themes and icon designs creates a most comfortable work environment for you.

Interface switching in GstarCAD is simple and you can see the effect without closing the software. It's also available 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 and menu bar.


ARES Commander does not support as many interface color themes as GstarCAD, it offers the light and black interface theme and you have to close the software and reopen it to make the effect available. ARES Commander does not support appearance tab to manage the display of the menu bar, command line, file tabs and so on.
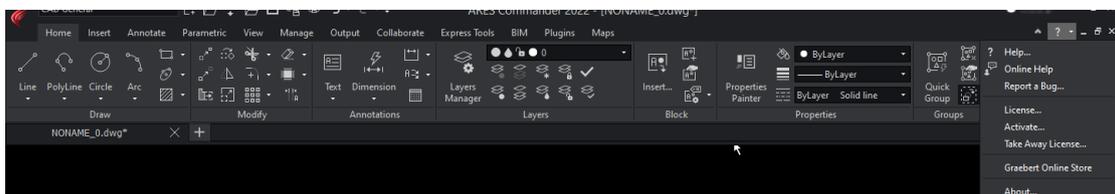
5.2. Operation Habit

GstarCAD continues its concise interface and ensures that the operation habits most users prefer remain unchanged. You will feel familiar with GstarCAD for its high compatibility and you will be soon creating and handling drawings in the exactly original ways.
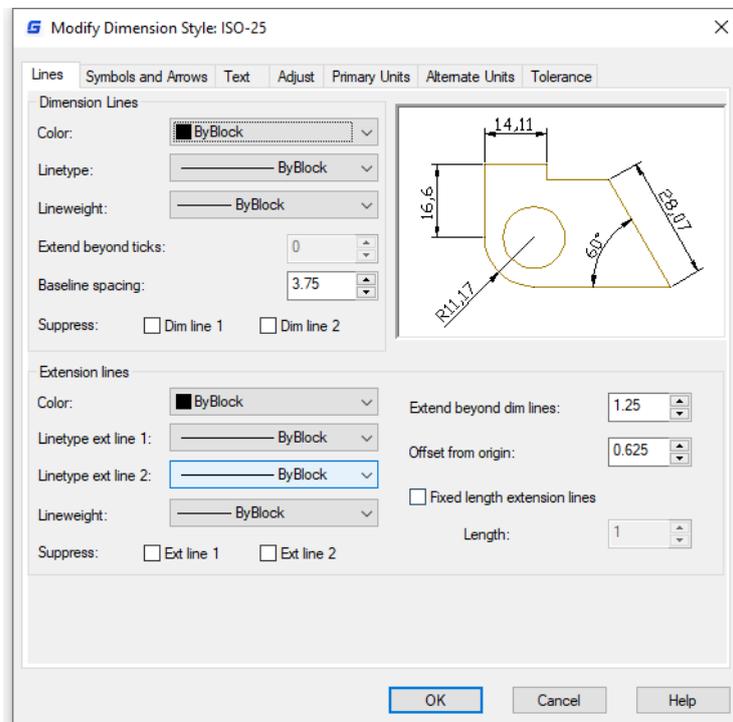

While ARES Commander still uses the traditional tree structure which has complex hierarchical relationships and is quite different from other competitors. And you need plenty of time to adapt to the complex hierarchy, show and hide the sub dictionary to find the options.
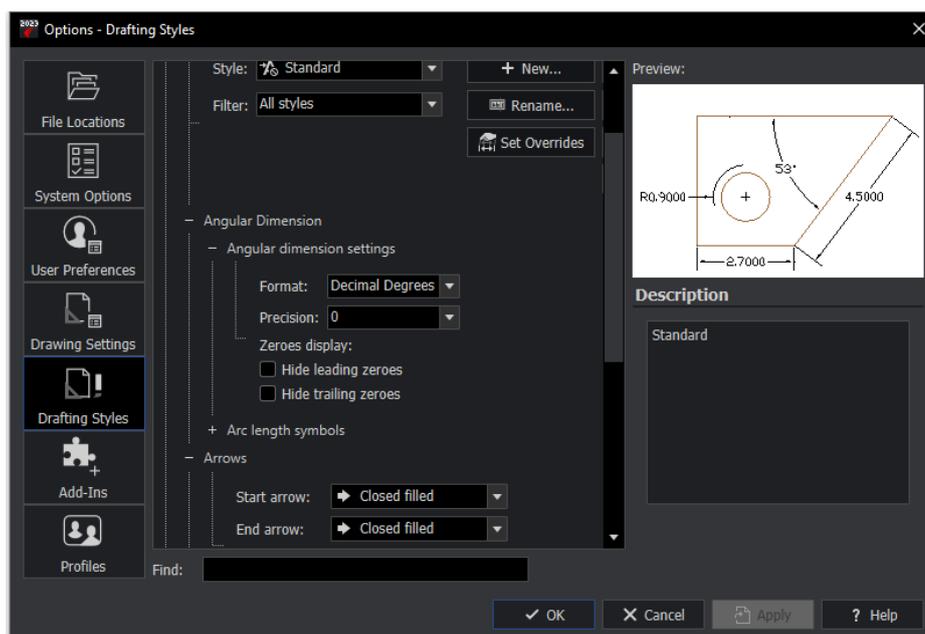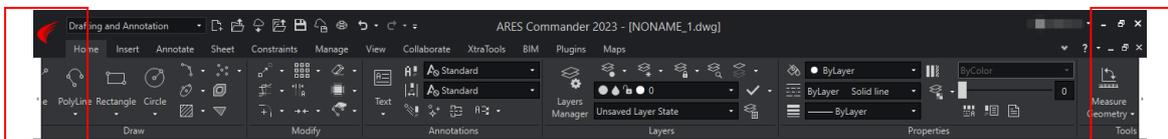
5.3. Panel Arrangement

GstarCAD arranges the panels and icons reasonable; you can easily find the features you need.
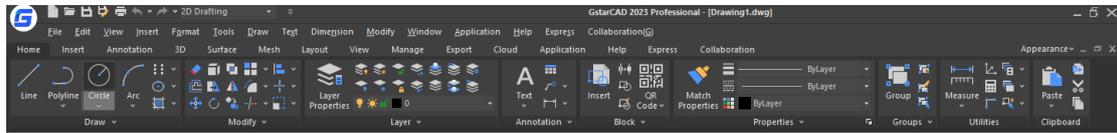
ARES Commander couldn't arrange the icons well and some of the features are hided, you have to click the arrow buttons to find the features.
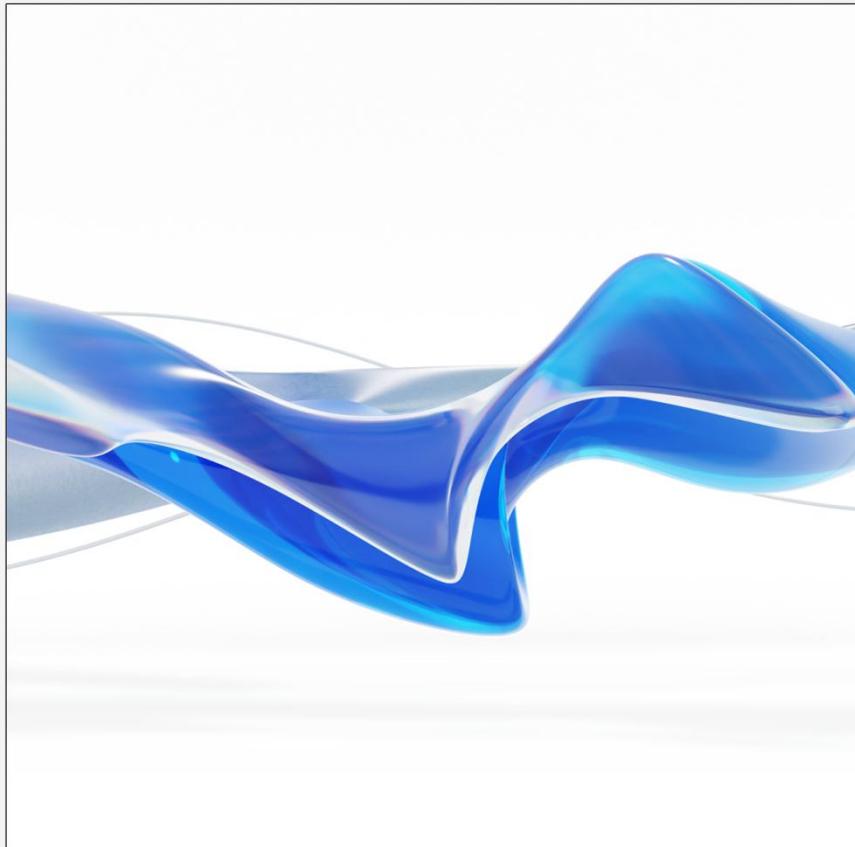
6. Conclusion

Through the above comparison, we can make the following conclusions: GstarCAD 2024 is far advantageous in terms of compatibility, functionality, user experience and so on. Compared with ARES Commander, GstarCAD is a better choice.

■ https://www.gstarcad.net/