



**HEXAGON**  
MANUFACTURING INTELLIGENCE

**ALPHACAM**

: 2021.0 - Alphacad

Alphacad

General	
Printer/Plotter Output	•
Insert Existing Drawing File	•
Input Raster Image Files	•
Convert Raster to Vector	•
Open/Save Drawing Template	•
User Definable ALPHACAM Text Fonts	•
File Inserter Project Manager Tab	•
CAD File Output Translators	
DXF, IGES	•
WMF, EMF	•
STL, VDA, Parasolid, Rhino	•
Views	
Dockable Project Manager	•
Dynamic 3D View	•
Reverse View	•
Shading/Wireframe Mode	•
Zooming (All, In/Out, Window, etc)	•
Zoom In/Out with Scroll Wheel	•
Panning	•
Panning with Middle Mouse Button	•
Set Limits	•
Change Background Color	•
Savable View Perspectives	•
Selectable View Perspectives	•
New View Window	•
Multiple/Dockable View Windows	•
Display Options	
Show Material Cut	•
Show Breaks	•
Single Step Mode	•
Draw Rapid Moves	•
Draw Tool Holder	•
Draw Material/Fixtures as Solids	•
Draw Surfaces in Layer Color	•
Draw Solid Bodies as Wireframe	•
CAD Geometry	
Fast Geometry	•
Edit/List Geometry	•
Construction Mode	•
Text Creation and Editing	•
Digitizing (On Screen and Tablet)	•
Line, Rectangle	•
Arcs, Circles	•



**HEXAGON**  
MANUFACTURING INTELLIGENCE

**ALPHACAM**

: 2021.0 - Alphacad

Alphacad

Polygon, Ellipse	•
Bolt Hole Circle	•
Involute Curve	•
Slot	•
Equal Spaced Holes	•
Enclosing Rectangle	•
Spline Creation and Editing	•
Convert Spline to Lines/Arcs	•
Assign Image to Geometry	•
3D Polyline	•
Geometry Macro Recorder	•
Parametric Sketcher ( * Creation and Editing requires a valid ALPHACAM maintenance agreement)	•
Run Parametric Sketch	•
<b>Surface Creation/Edition</b>	
Surface from Sections	•
Swept Surface from 2 Curves	•
Swept Surface from 3 Curves	•
Coons Patch from 3 Curves	•
Coons Patch from 4 Curves	•
Ruled Surface	•
Surface of Revolution	•
Fillet Between 2 Surfaces	•
Tri-Corner Fillet	•
Extruded Surface	•
Flat Surface	•
Break Intersecting Surfaces	•
Edit Surface Control Points	•
Un-Trim Surfaces	•
Extend Surface	•
Surface Finder	•
Extract Edge from Surfaces	•
Convert to STL Facets	•
<b>Geometry/Tool Path Editing</b>	
Undo	•
Redo	•
ALPHACAM Clipboard (Cut, Copy Paste between diferent sessions)	•
Fabricate (Cut, Crop, Delete Area, Subtract, Unite, Overlapping, Intersecting, Loop, Paneling)	•
Break, Join	•
Break at Distance	•
Trim, Extend	•
Extend by Distance	•
Fillet, Chamfer	•
Offset (Element and/or Path)	•
Grouping/Ungrouping	•



**HEXAGON**  
MANUFACTURING INTELLIGENCE

**ALPHACAM**

: 2021.0 - Alphacad

Alphacad

Definable Cutting Start Point	•
Manual/Automatic Cut Ordering	•
Change Object Types	•
2D Array, Scale, Stretch, Skew	•
2D Move, Copy, Mirror, Rotate	•
2D Transform - Dynamic combined command	•
3D Move, Copy, Mirror, Rotate	•
Auto 2D/3D Mode	•
Edit Geometry by Node	•
<b>3D</b>	
Set Materials	•
Set Work Volume	•
Make Local Axis Horizontal	•
Specify Panel	•
Show Panel Edges	•
Select Panel Edge	•
Set Geometry Z Levels	•
Create Sections	•
3D Part Rotation	•
Project 3D to 2D	•
Reverse Tool Side (On Surfaces)	•
Edit 3D Polyline	•
3D Project to Surface or Plane	•
Wrap on Surface	•
Wrap Around Geometry	•
Edit Geometry Z Point by Point	•
<b>Work Planes</b>	
Browse/Select Work Planes	•
Slice Through Work Volume	•
2 Lines for X and Y Axes	•
Exiting Geometry	•
Parallel to Current Work Plane	•
Perpendicular to Current Work Plane	•
Reverse Current Plane	•
As Current Plane, Different Origin	•
By Name	•
Best Fit Plane Through Points	•
By Line Element Vector	•
Normal to View	•
Set Work Plane Origin	•
Work Plane Properties	•
Order Work Planes	•
Cancel Work Plane	•
From Solid Model Face	•



**HEXAGON**  
MANUFACTURING INTELLIGENCE

**ALPHACAM**

: 2021.0 - Alphacad

Alphacad

Utilities	
Distance/Angle between Points	•
Report Coordinates of a Point	•
Radius of a Arc/Circle	•
Snap to Same X, Y or Z as...	•
Snap Points	•
Auto Snap Points	•
Points to Lines/Arcs	•
Auto-Close Contours	•
Common Line Removal	•
Fold/Unfold	•
Develop to Flat	•
Join Parts with Bridge	•
Link Adjacent Circles	•
CAD Utilities	
User Layers	•
ALPHACAM Layers	•
Dimensions	•
Hatch	•
Set Line Type	•
Edit Line Type	•
Line Properties	•
Hide Parts	•
Show All Parts	•
Move Dimensions	•
Magnify	•
STL Utilities	
Convert STL Facets to Polylines	•
Delete STL Facets	•
Chop STL into Sections	•
Reverse Face Colors	•
Extract 3D Edges	•
Project Edges to Current Work Plane	•
Create Enclosing Rectangle	•
Simulation	
Shaded Simulation	•
Visual Basic for Applications (VBA)	
Turn Add-Ins On/Off	•
Run Macros	•
Open VBA Project for Running	•
Open VBA Project for Editing	•
Create New VBA Project	•
Open VBA Post for Editing	•
Integrated VBA Editor	•



**HEXAGON**  
MANUFACTURING INTELLIGENCE

**ALPHACAM**

: 2021.0 - Alphacad

Alphacad

CAD Importers

See Supported CAD Table document for more details