

Full Feature List

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Feature	Description	SharpCam 2.5D	SharpCam 3D	SharpCam 3D Pro
Solid Verification	Advanced Polygon Model based integrated toolpath verification	✓	✓	✓
Pocketing	Advanced pocketing with unlimited number of pockets and islands	✓	✓	✓
Drilling	Drilling, pecking, boring, reaming, tapping, rigid tapping and custom drilling cycles	✓	✓	✓
Thread Milling	Helical Entry/Exit arc and or line	✓	✓	✓
3D Roughing	Z level roughing of Solid/STL Models		✓	✓
Parallel 3D Finishing	Finishing/Semi finishing of Solid/STL Models by means of parallel passes in the XY plane		✓	✓
Z Level 3D Finishing	Finishing/Semi finishing of Solid/STL Models by means of Z level passes		✓	✓
3D Constant Cusp	Creates an equidistant cut pattern on the machining surfaces. The aim is to have a constant distance between each pass so that the cusps created will have the same height			✓
Projected 3D Curves	Project contours onto model Project radial pattern onto model Project spiral pattern onto model Project offset curves from give contour			✓
3D FlatLands	Machine true flat areas of the model with passes that are offset segments of the flat area boundary			✓
3D Pencil	Automatically detects inlaying edges. A single tool path will be created along these edges			✓
Rest Rough/Finish	Machine remaining material left by a previous larger tool			✓
Adaptive roughing strategy	Ensures that the cutting conditions remain almost constant, which offers great improvements compared to conventional constant offset roughing strategies			✓
Pilot Drilling	Specify previous drilling operation to be used for entry points			✓
Gouge Check	Specify Models to be avoided			✓
Material Stock Containment	3D machining is based on supplied Material Stock. Used for pre-cast or pre-machined stock			✓
Silhouette Containment	Limits the machining area by the silhouette of the machining surfaces			✓
Ramping and Lead In-Out	Defines the lead-in motion for the 3D Roughing. Defines lead-in/out motion for all other strategies			✓
Arc Fit	Convert where possible, linear moves to arcs for 3D strategies			✓
Adaptive Feedrate	Automatically adapts the feedrate depending on the tool engagement volume in the material			✓
Explode	Explode model such that each face is a model			✓
Tool Management	Create tool libraries/tool kits with the Tool Manager, edit, copy and move tools	✓	✓	✓
CAD	2D CAD creation	✓	✓	✓
Dimensions	Dimensioning: Smart Linear, Horizontal, Vertical, Aligned, Diameter, Radius, Angle, Coordinate and Note	✓	✓	✓

Rearrange Operations	Operation can be reordered by drag and drop	✓	✓	✓
Entry/Exit	Line and or arc entry/exit, linear and helical ramp entry	✓	✓	✓
Transforms	Move, copy, rotate, mirror and scale contours along with associated toolpaths	✓	✓	✓
Simulation	3D tool simulation. Solid, translucent or wireframe animated tool display	✓	✓	✓
Context Snapping	End, mid, centre, quadrant, tangent, intersection, perpendicular and parallel snapping	✓	✓	✓
Modify Contours	Advanced fillet, trim, extend, split and explode	✓	✓	✓
Text	Create text outlines from fonts installed on the system (TrueType etc). Outlines can then be machined	✓	✓	✓
Text	Follow a Contour			✓
Single line engraving fonts	Create single line text for engraving using SharpCam type fonts.	✓	✓	✓
Sub Routines	Output multiple passes using Sub Routines. i.e. M98 PNNNN for Fanuc, Labels for Heidenhain, or whatever form sub routines take on the control. Reduces program size	✓	✓	✓
Insert	Insert an existing SharpCam file or any supported CAD file into an existing		✓	✓
Extract Geometry from Solid Model	Extract Contours from Face, Extract Contours from Loop and Extract Contours from Edge commands for feature extraction		✓	✓
Align Solid Model	Align model face to XY plane, Align to Edge and Flip Model 180° commands to assist in model orientation		✓	✓
Use defined fonts	Create custom design fonts.	✓	✓	✓
Multi Document Interface	Open unlimited number of Parts within one instance of SharpCam	✓	✓	✓
Cad File Translations	AutoCad - dxf and dwg, stereo lithography - stl	✓	✓	✓
	STEP and IGES		✓	✓
Undo/Redo	Unlimited undo/redo	✓	✓	✓
Viewing	Dynamic panning, zooming and rotation with middle mouse button/wheel	✓	✓	✓
Hidden Line	Connection markers help identify hidden lines	✓	✓	✓
Machine Developer	Edit Machine Definitions (post processors) with the Machine Developer using Visual Basic.Net	✓	✓	✓
RS232	Built in RS232 communication	✓	✓	✓
Nc Code Editing	Free Nc code editor with built in RS232 communication - SharpEdit	✓	✓	✓
Calculator	Use any combination of +/* in an input box to calculate any value	✓	✓	✓
Operation Suppression	Suppression of any/all operations to prevent Nc code generation	✓	✓	✓
Layers	Create and manage layers	✓	✓	✓
Cycle time	Test 'what if' scenarios	✓	✓	✓
Updates	Automatic self-updating to the latest version during allowed period	✓	✓	✓