

## CAMWorks 2011

Numerous enhancements and features have been added to CAMWorks including ...

### ▶ **SolidWorks Property Manager in CAMWorks**

CAMWorks 2011 further extends the integration of frequently used CAMWorks commands in the SolidWorks property Manager.

### ▶ **Volumill™**

VoluMill, the ultra high-performance toolpath plug-in engine for high speed milling for 2 .5 axis and 3 axis roughing operations is being introduced. It is ideal for prismatic parts and complex 3-D shapes as its algorithms result in more intelligent toolpaths to machine pockets, slots, and arbitrary shapes.

### ▶ **ElectrodeWorks for CAMWorks**

ElectrodeWorks™ is used to design electrodes for electrical discharge machining. The easy-to-use interface automates all aspects of the calculation and design of electrodes including design, management, documentation and manufacturing.

### ▶ **User defined turn inserts**

User defined turn inserts can be used to machine the features of the turn part. Helps when the standard inserts cannot machine the part completely.

### ▶ **Creating Feature Conditions within CAMWorks**

Allows the user to define new feature conditions, user-defined strategies and partially modified existing feature conditions from within CAMWorks and save it directly to TechDB.

### ▶ **Improved Performance with MFG View**

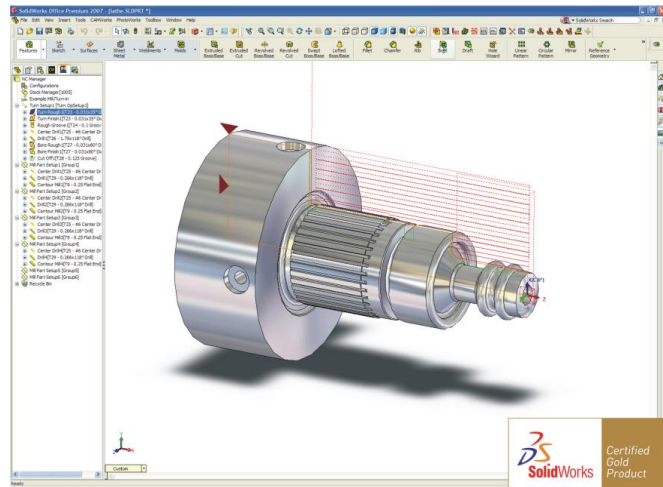
More features recognized. Slot features with fillet and taper as well as slots with island(s) get recognized. Open pocket covers more machinable area. Performance improves by more than 40%.

### ▶ **Improved Insert Operation command**

Simplifies the process of interactively inserting operations using intuitive UI.

## #1 CAM Solution for SolidWorks

CAMWorks is a SolidWorks® certified Gold CAM product that provides state-of-the-art machining capabilities seamlessly integrated in SolidWorks. The latest innovations in CAMWorks 2011 together with SolidWorks excellence in design allow manufacturers to engineer, design and build better products faster and more accurately. This new generation CAM software has automatic feature recognition, automatic operations planning and a knowledge-based Technology Database.



CAMWorks was the first fully integrated CAM solution designed exclusively to operate in SolidWorks. This close integration means:

- CAMWorks machining trees and commands are available in SolidWorks with the click of a button. You never have to leave SolidWorks to generate toolpaths.
- CAMWorks uses the same SolidWorks geometry to generate toolpaths to ensure the part you machine is the same part you have modeled.
- Time-consuming file transfers using standard file formats such as STL, STEP, TIFF, AutoCAD, Parasolid, ACIS, and JPG are eliminated.

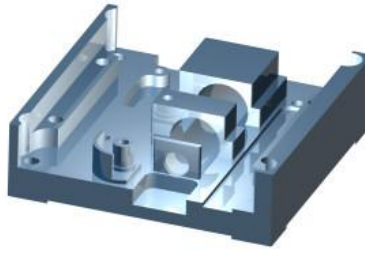
CAMWorks runs in SolidWorks or as part of a cost-effective package that includes CAMWorks Solids, an integrated solid modeler.

"As an innovator, I was looking for a CAM application which I could use to bring my ideas to reality. CAMWorks did just that for me. It was very easy to learn and has really helped me machine parts that were not feasible with other CAM software."

Chris Gamble  
Owner, SunTech Innovations

### ▶ Automatic Feature Recognition

AFR analyzes the solid model geometry and identifies mill features such as holes, slots, pockets, and bosses; turning features such as outside and inside profiles, faces, grooves and cutoffs; and wire EDM features such as die openings. AFR recognizes features regardless of the CAD system used to create them.



### ▶ Interactive Feature Recognition

Interactive Feature wizards are used for defining features that are not recognized automatically or features that need to be defined for your facility's machining requirements. Similar 2½ Axis and Multi Surface features can be created quickly using the Copy command. Existing features can be modified easily.

### ▶ Knowledge-Based Machining

The Technology Database (TechDB) is the intelligence behind the machining automation in CAMWorks. The database associates tooling, operation strategies and machining parameters to the features. When operations are generated, CAMWorks applies these settings automatically. Operation parameters can be modified before or after generating toolpaths. To further enhance the automation process, the knowledge-based rules in the TechDB are fully customizable to apply your company's best practices. The machining information in the database includes:

- "Virtual" machines for all your CNC machines and the associated controller and tool crib
- The tool library that can contain all the tools in your facility
- Data for calculating feed rates, spindle speed, stock materials, tool materials
- Machining sequences and operations for each combination of feature type, end condition and size.

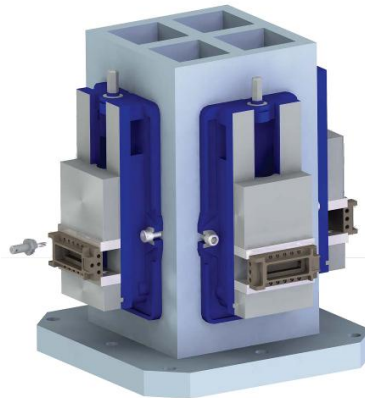
### ▶ High Speed Machining

The powerful integrated strategies that are included in every milling module generate efficient, smooth, gouge-free toolpaths that maintain continuous machine tool motion for higher feedrates, improved surface finish, reduced wear on cutters and longer life for machine tools. These strategies deliver advanced machining and linking solutions for your molds, tools, dies and complex multi-axis parts.

### ▶ Assembly Mode for Milling

CAMWorks leverages the power and flexibility of SolidWorks Assembly mode to support NC programming of multiple parts for production machining and to more accurately represent the machining environment.

- Model the machining environment (clamps, fixtures, parts, stock, etc.).
- Machine multiple copies of a part or different parts in the assembly.
- Output code in subprogram format.
- Machine the same part with multiple different machine tools.
- Machine multiple SolidWorks part configurations in one assembly.
- Split instances of a part to generate separate features and operations.
- Import CAMWorks data from a part into an assembly document.



### ▶ Additional Features and Tools

Numerous integrated features and visual tools improve productivity:

- Graphical toolpath generation display.
- Configurations can be used to program families of parts quickly and to store CAM data for multiple different machines in one file.
- Material removal simulation can reduce the need for dry runs at the machine tool.
- Step Thru Toolpath command to view toolpath movements.
- Reorder Tool command assigns tool numbers sequentially based on user-defined settings.
- Integrated post processor supports virtually any CNC machine tool. Use the Universal Post Generator to customize G-code output.
- Optionally output an enhanced CL file to use with external third party post processing programs.
- API's to customize CAMWorks.

### ▶ System Requirements

- Platform: Intel® and AMD® processors
- Min. RAM: 1GB (recommended: 2GB or more)
- Solid Modeler: 32- or 64-bit SolidWorks or CAMWorks Solids 2010 or 2011
- OS: 32- or 64-bit Windows Professional®, Windows Vista® (Ultimate, Business and Enterprise), Windows 7 (Professional, Ultimate and Enterprise)
- Microsoft Access 2003, 2007

### CAMWorks Modules

CAMWorks modules are available in a variety of bundles or combinations:

- 2½ Axis, 3 Axis, 3 Axis with undercut,
- 4 Axis and 5 Axis Simultaneous Milling;
- 2 and 4 Axis Turning;
- Rotary Milling;
- 2 and 4 Axis Wire EDM
- Volumill™
- ElectrodeWorks™

**Includes:** SolidProfessor Multimedia Training Course - SolidWorks Core Concepts & CAMWorks Mill, Turning & Wire EDM Fundamentals

**Add-ons:** Machine Simulator, CAMWorks Utilities

CAMWorks Solids integrated solid modeler can be packaged with CAMWorks. This allows CAMWorks to function as a standalone product without the need to purchase an additional solid modeler.



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**Authorized Reseller**