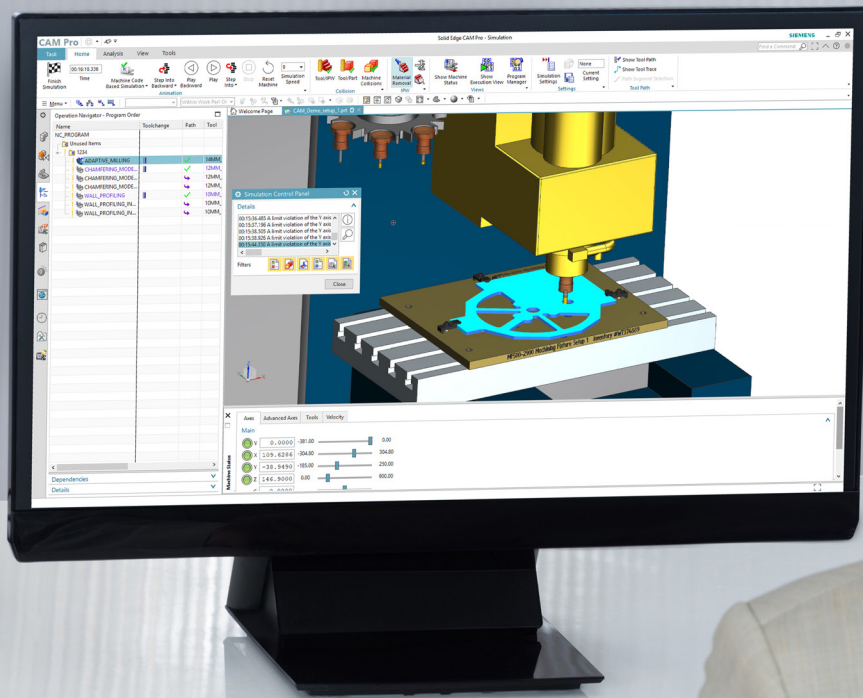




SIEMENS DIGITAL INDUSTRIES SOFTWARE

# Solid Edge Cam Pro

Delivering CNC machine tool value

## Benefits

- Get the most out of your tools using the latest manufacturing techniques
- Maximize shop floor efficiency with a single unified CAM system
- Work directly with Solid Edge parts and assemblies, maintaining associativity
- Low cost of ownership, easy to deploy, learn and use

## Summary

Solid Edge® CAM Pro, a capable, proven computer-aided manufacturing (CAM) solution from Siemens, features a rich set of tools to help you finish the job right the first time. Solid Edge CAM Pro is a modular, flexible configuration of numerical control (NC) programming solutions that allows you to maximize the value of your machine tools. Designed with Solid Edge users in mind, CAM Pro provides powerful NC programming with a low total cost of ownership and is easy to deploy, learn and use.

## Powerful, yet easy to use

Solid Edge CAM Pro helps manufacturers define and execute a wide range of manufacturing processes, including milling, turning and feature-based machining, with comprehensive machining simulation.

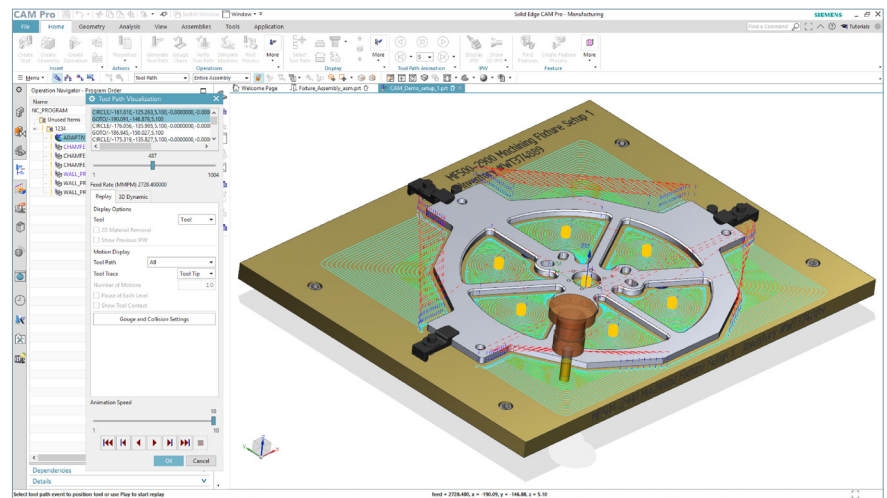
CAM Pro ensures accurate and efficient manufacturing processes working directly with Solid Edge parts and assemblies. Sending files from Solid Edge to CAM Pro is as easy as one click, and the data retains associativity so that late-stage design changes can be easily incorporated into the manufacturing plan.

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## Features

- Scalable solutions offer wide-ranging capabilities, including turning, milling and feature-based machining
- Tutorials, templates and wizards simplify use
- Tight integration with Solid Edge Mechanical Design, launch with one click
- Postprocessing, including searchable, online database of downloadable postprocessors
- Machine simulation, featuring machine-code-driven motion



An intuitive, modern user interface (UI), easy-to-follow tutorials, built-in templates and wizards make Solid Edge CAM Pro remarkably easy to use. Consistent navigators manage key elements while dialogs provide graphical help and instant feedback in the graphics area. Templates are used extensively throughout the system to capture and re-apply methods, geometry, setups, operations and tool selections. Built-in wizards and the ability to create custom wizards take the user to the next level of automated interaction. Easy-to-follow "Manufacturing Day One" tutorials help users learn the powerful software and can be revisited later as a refresher.

## Full range of capabilities

Avoid the need for, and the cost of, multiple CAM systems in the machine shop with Solid Edge CAM Pro. The scalable solution offers a wide range of in-depth NC programming capabilities, providing flexibility and maximizing the value of your investment.

In addition to the 2.5-axis milling capabilities included with Solid Edge Classic, Foundation and Premium active maintenance contracts, CAM Pro is available in 2.5-axis, 3-axis and 5-axis bundles. These configurations along with numerous add-on functionalities allow users to customize the right-sized solution to best meet their individual manufacturing needs.

**Drilling** – addresses drilling, reaming, boring, tapping, peck drilling and custom cycles. Automated hole making is available with the feature-based machining options.

**2.5-axis milling** – 2.5-axis roughing patterns can be applied based on basic boundary data or solid geometry. Zig-zag, offset, and plunge milling are examples of the toolpaths provided, and high-speed adaptive roughing toolpaths are available. Feature-based machining functions automate the identification and programming of slots and faces.

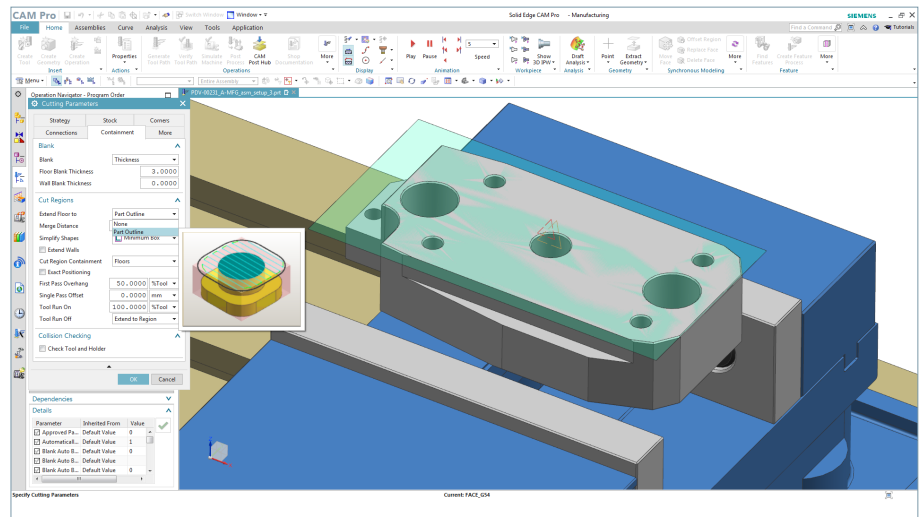
**Turning** – a complete solution that is easy enough to use on simple programs and capable enough to tackle your toughest geometry in multi-spindle, multi-turret applications. The system can work with solids, wireframe or 2D profiles. Advanced turning processes, including Sandvik PrimeTurning™, offer increased productivity by removing more material while also enabling faster speed, feed and increased tool life.

**3-axis milling** – for roughing, rest milling, semi-finishing, and finishing of contoured surfaces, with a complete set of milling strategies to address the challenges of complex geometry. 3-axis milling provides high-speed machining solutions for creating smooth cutting patterns for high-quality surfaces.

**Wire EDM** – a complete solution for programming 2 4-axis wire electrical discharge machining (EDM) machines. A range of wire operations is available, including multi-pass profiling, wire reversing and area removal.

**Synchronization** – a graphical means of displaying multiple channels, with scrolling code in a choice of formats, time displays and with functions to add wait and sync codes. The synchronization manager, very useful for today's complex mill-turn and turn-mill machines, is directly linked to the internal postprocessor and runs from posted output for the greatest accuracy.

**Machining simulation** – to avoid tying up a machine in unproductive prove-outs, the integrated machine tool simulation provides a more complete simulation than most systems with its machine-code-driven motion. Smart Machine Simulation Kits are available via Post Hub for a wide variety of machine tools, and custom kits can be created.



**5-axis milling** – CAM Pro offers highly flexible 5-axis programming functions combining highly automated elements for tedious tasks such as geometry selection and detailed user control for roughing and precise machining. 5-Axis Roughing allows for greater efficiency and longer tool life when machining complex geometry

### Tool path visualization and editing

You can stay confident with built-in tool path visualization and material removal verification tools. Integrated collision checking identifies any possible problems. You can also make fast changes to tool path results with graphical editing tools and protect your edits by locking tool paths from future re-calculations. No need for third-party visualization or machining simulation software.

### Postprocessing

CAM Pro has a comprehensive postprocessing capability that allows posts to be handled easily. You can edit and fine tune existing postprocessors with our included interactive post builder application or even build a postprocessor from scratch using post builder templates. In addition, you can use included sample posts or download posts from Post Hub, a searchable, online database of postprocessors.

|                                                    | Solid Edge<br>CAM Pro                             | Solid Edge<br>CAM Pro | Solid Edge<br>CAM Pro | Solid Edge<br>CAM Pro | Solid Edge<br>CAM Pro |
|----------------------------------------------------|---------------------------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|
|                                                    | Include for<br>Solid Edge Users<br>on Maintenance | 2.5-Axis Bundle       | 3-Axis Bundle         | 5-Axis Bundle         | Total Machining       |
| Key Feature/Function                               |                                                   | SE425                 | SE430                 | SE445                 | SE480                 |
| Solid Edge Foundation                              | Included with<br>Solid Edge<br>X                  | X                     | X                     | X                     | X                     |
| 3D Printing Preparation                            |                                                   | X                     | X                     | X                     | X                     |
| STL, 3MF and OBL Export                            |                                                   | X                     | X                     | X                     | X                     |
| Gateway and CAM Base                               |                                                   | X                     | X                     | X                     | X                     |
| Industry Translators                               | X                                                 | X                     | X                     | X                     | X                     |
| Assemblies                                         | X                                                 | X                     | X                     | X                     | X                     |
| Toolpath Visualization and Material Removal        | X                                                 | X                     | X                     | X                     | X                     |
| Graphical Toolpath Editing                         | X                                                 | X                     | X                     | X                     | X                     |
| Post Processing                                    | X                                                 | X                     | X                     | X                     | X                     |
| Post Builder and Post Configurator (Basic License) | X                                                 | X                     | X                     | X                     | X                     |
| Post Hub                                           | X                                                 | X                     | X                     | X                     | X                     |
| Shop Documentation                                 | X                                                 | X                     | X                     | X                     | X                     |
| Work Instruction Authoring                         | X                                                 | X                     | X                     | X                     | X                     |
| Planar Milling                                     | X                                                 | X                     | X                     | X                     | X                     |
| Adaptive Cut Pattern 2.5 Axis                      | X                                                 | X                     | X                     | X                     | X                     |
| Face Milling                                       | X                                                 | X                     | X                     | X                     | X                     |
| Hole Making                                        | X                                                 | X                     | X                     | X                     | X                     |
| Feature Based Machining                            | X                                                 | X                     | X                     | X                     | X                     |
| Cavity Milling                                     | X                                                 | X                     | X                     | X                     | X                     |
| Z-level Profiling                                  | X                                                 | X                     | X                     | X                     | X                     |
| Probing                                            | X                                                 | X                     | X                     | X                     | X                     |
| 3+2 Axis Positioning                               | X                                                 | X                     | X                     | X                     | X                     |
| Fixed Axis Area Milling                            | Add-on                                            | Add-on                | X                     | X                     | X                     |
| Flow Cut for Valley Rest Milling                   | Add-on                                            | Add-on                | X                     | X                     | X                     |
| Streamline Milling                                 | Add-on                                            | Add-on                | X                     | X                     | X                     |
| Cut Between Levels for Semi finishing              | Add-on                                            | Add-on                | X                     | X                     | X                     |
| Nurbs and Spline Output                            | Add-on                                            | Add-on                | X                     | X                     | X                     |
| Facet Machining                                    | Add-on                                            | Add-on                | X                     | X                     | X                     |
| Adaptive Clearance Strategy                        | Add-on                                            | Add-on                | X                     | X                     | X                     |
| Sequential Milling for User Control                | Add-on                                            | Add-on                | Add-on                | X                     | X                     |
| Variable Axis Surface Milling                      | Add-on                                            | Add-on                | Add-on                | X                     | X                     |
| Contour Profiling for Swarf Cutting                | Add-on                                            | Add-on                | Add-on                | X                     | X                     |
| Turning                                            | Add-on                                            | Add-on                | Add-on                | Add-on                | X                     |
| Integrated Simulation and Verification             | Add-on                                            | Add-on                | Add-on                | Add-on                | X                     |
| ISV: Tool Path Driven                              | Add-on                                            | Add-on                | Add-on                | Add-on                | X                     |
| ISV: G-Code Driven                                 | Add-on                                            | Add-on                | Add-on                | Add-on                | X                     |
| Multi-channel Synchronization                      | Add-on                                            | Add-on                | Add-on                | Add-on                | X                     |
| Machine Tool Builder                               | Add-on                                            | Add-on                | Add-on                | Add-on                | X                     |
| Machining Knowledge Editor                         | Add-on                                            | Add-on                | Add-on                | Add-on                | X                     |
| Turbomachinery Milling                             | Add-on                                            | Add-on                | Add-on                | Add-on                | Add-on                |
| 3-to-5 Axis Milling (Tilt-Tool)                    | Add-on                                            | Add-on                | Add-on                | Add-on                | Add-on                |
| Wire EDM                                           | Add-on                                            | Add-on                | Add-on                | Add-on                | Add-on                |
| Smart Machining Kit Simulation (SMKS)              | Add-on                                            | Add-on                | Add-on                | Add-on                | Add-on                |
| Rotary Machining                                   | Add-on                                            | Add-on                | Add-on                | Add-on                | Add-on                |

**Postprocessing, cont'd**

Included with Solid Edge CAM Pro, the Post Hub library enables a streamlined process to generate production-ready CNC programs for your applications. Post Hub lets you access more than 1,250 postprocessors directly from CAM Pro and download them to your workstation. The extensive online postprocessor library enables you to program a wide range of milling, turning and multi-function machines. It includes postprocessors for many machines and controllers, including DMG MORI, Haas, Makino, Mazak, and Okuma.

**Shop documentation**

You can produce html setup documents with the included shop doc capability. Product manufacturing information (PMI) is transferred along with geometry data from Solid Edge to Solid Edge CAM Pro. That makes it easy for the NC Programmer to design the manufacturing plan according to the engineer's specifications.

**Optimized with Solid Edge, CAD neutral**

Optimized when integrated with Solid Edge Mechanical Design, CAM Pro can also be used independently of any specific CAD system. Key industry translators can read data from practically any CAD system, including Siemens Parasolid® software, IGES, DXF and STEP and JT formats. In addition, you can save data in all these formats, plus STL, and maintain a high level of associativity regardless of the geometry source. Last minute revisions are easily accounted for, in many cases, only requiring tool paths be regenerated.

**Extending value**

The Solid Edge portfolio is an integrated set of powerful, comprehensive and accessible tools that advance all aspects of the product development process. Solid Edge addresses today's complexity challenges with automated digital solutions that cultivate creativity and collaboration.

By harnessing the latest innovative technologies in mechanical and electrical design, simulation, manufacturing, publications, data management and cloud-based collaboration, Solid Edge dramatically shortens time-to-market, provides greater production flexibility and significantly reduces costs with its collaborative and scalable solutions.

**Minimum system requirements**

- Windows 10 Enterprise or Professional (64-bit only) version 1809 or later
- 16 GB RAM
- 65K colors
- Screen resolution: 1920 x 1080
- 8.5 GB of disk space required for installation

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