

CAM Express – Advanced Machining

fact sheet

Siemens PLM Software

www.siemens.com/plm/camexpress

► Summary

CAM Express software is an in-depth, highly flexible system that allows users to maximize the value of their investments in the latest, most efficient and most capable machine tools. The Advanced Machining package is configured to program 5-axis machine tools, including multi-function 5-axis mill-turn machines. It enables fast, accurate machining of typical complex aerospace parts.

Benefits

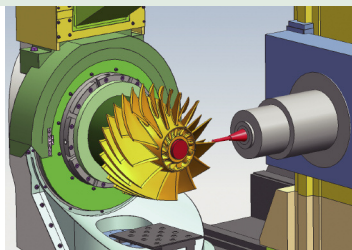
- Easy to use
- Easy to deploy
- Low cost of ownership
- Work with any CAD data
- Integrated system puts verification and simulation in the programming environment
- Postprocessor integrated and accessible to user
- High-speed machining techniques drive efficiency
- Multi-channel machining supports multi-function turning centers
- 5-axis machining capabilities underpin airframe and turbo industries

Features

- Free Flow Machining technology provides smooth, uninterrupted cutting
- Single in-process workpiece between milling and turning
- Full tool library
- Machining data libraries
- Flexible operation navigator
- Shop documentation

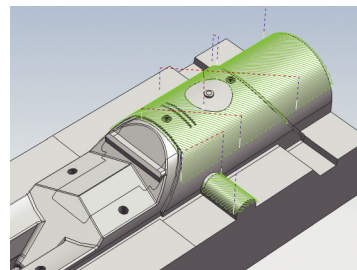
5-axis milling

CAM Express offer highly flexible 5-axis programming functions combining highly automated elements for tedious tasks such as geometry selection and detailed user control for precise machining.



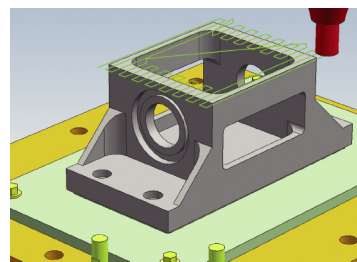
3-axis milling

Roughing, rest-milling, semi-finishing and finishing of contoured surfaces is accomplished with a complete set of milling strategies to address the challenges of complex geometry. This capability includes Siemens PLM Software's patent pending Free Flow Machining technology, as well as additional functions needed for high-speed machining.



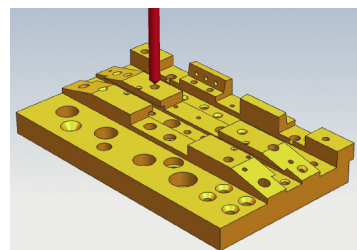
2½-axis milling

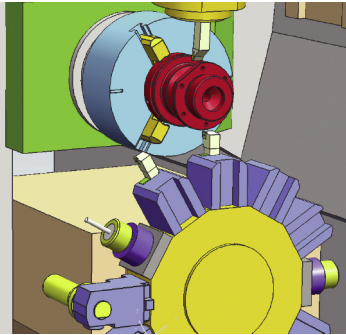
2½-axis roughing patterns can be applied based on basic boundary data or solid geometry. Zigzag, offset and plunge milling are examples of the toolpaths provided. High-speed roughing toolpaths such as trochoidal are available here. Feature-based machining functions automate the identification and programming of slots and faces.



Drilling

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





Turning

CAM Express provides 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.

Synchronization

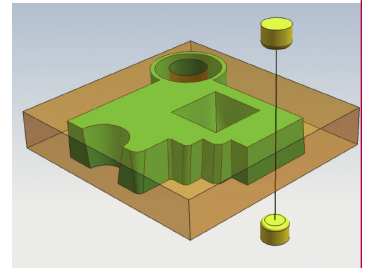
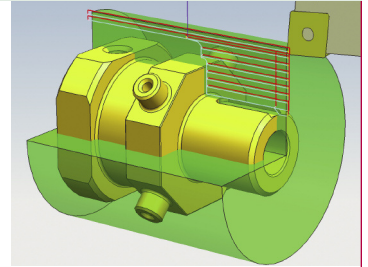
Harness the power of multi-function machine tools with a graphical means of displaying an unlimited number of channels, with scrolling code in a choice of formats, time displays and with functions to add wait and sync codes. The Synchronization Manager is directly linked to the internal postprocessor and runs from posted output for the greatest accuracy.

Machining simulation

Avoid tying up a machine in unproductive prove-outs with the integrated machine tool simulation in CAM Express. It provides a more complete simulation than most systems with its machine code driven motion. Special tools are provided to build complete kinematic machine tool models.

Wire EDM

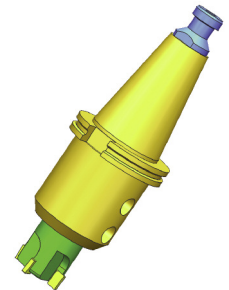
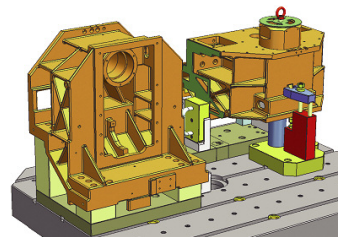
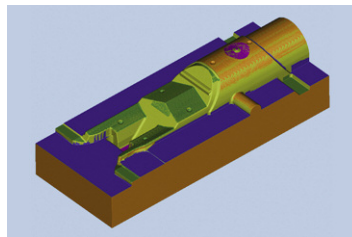
CAM Express provides a complete solution for programming 2- to 4-axis wire EDM machines. A range of wire operations is available, including multi-pass profiling, wire reversing and area removal.



Comprehensive foundation –

CAM Express includes extensive support functions that add substantial value

- *Toolpath verification* – dynamically removes material
- *Geometry modeling and translation tools* – construct detailed environments
- *Libraries* – organize resources and parameters for re-use
- *Integrated postprocessing* – includes an interactive authoring application



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