



# SolidCAM



## Comprehensive CAM Solution



High-end Milling  
and Turning



Swiss - Type Milling  
and Turning



iMachining AI  
Artificial Intelligence Milling



5-axis Simultaneous  
Milling

Providing the best technological strength.  
Enhancing competitiveness for users.  
Fostering unconstrained thinking abilities.  
Introducing new technologies and inspiring  
creativity.



AutoCAMIN  
RESEARCH & TECHNOLOGY PVT LTD

[www.autocamin.com](http://www.autocamin.com)



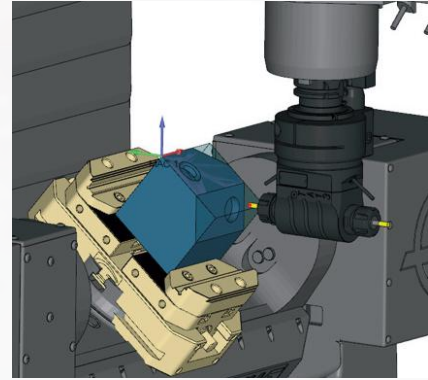


# SolidCAM

CAD/CAM Integrating leaders

## Why SolidCAM?

- ✓ **Innovative cutting parameters** : AI automates tool path and parameter optimization, boosting efficiency.
- ✓ **Optimized machining strategies** : Employing advanced techniques for faster, stable, and highly efficient machining.
- ✓ **Precise machining simulation** : Ensuring machining accuracy and safety via precise path simulation and collision detection.
- ✓ **Excellent technical support**: Offering professional assistance and training to fully maximize the potential of SolidCAM and provide comprehensive solutions.
- ✓ **Extensive machine support**: Catering to diverse machining needs by providing support for various complex machine types, including turning-milling, 5-axis milling machines, and more.



THERE IS CAM –  
THEN THERE IS  
**SolidCAM**



## The Fastest-Growing CAD/CAM Globally

- ✓ Founded in 1984 in Israel, with 120 sales channels spanning **46 countries worldwide**.
- ✓ **40 years** of professional experience in CAD/CAM applications.
- ✓ Consistently the fastest-growing CAM system for 7 consecutive years.
- ✓ Wide industry coverage: **manufacturing, electronics, healthcare, aerospace, automotive, molds, and more.**

## Advantages of SolidCAM Integration with SolidWorks

- ✓ **Seamless integration with the SolidWorks interface**, extensively supporting all commonly used CAD formats.
- ✓ **Automatic synchronization and update of tool paths** after design changes.
- ✓ **Defining fixtures, tools, and other components** in SolidWorks operating mode.
- ✓ **Flexible module applicable to all types of machining machines.**
- ✓ **Widely used CAD software in the mechanical industry**, allowing for a quick learning curve.

10+ years of gold certification partnership



**Perfect  
integration**

**SolidWorks**



## AI Processing Trends

- ✓ **iMachining: Boosting efficiency by 70%** through neural networks, automatic **parameter adjustment**, and optimized tool paths.
- ✓ Effortless **cutting parameter** determination with **AI technology implementation**.
- ✓ Minimizing machine hazards by eliminating human guesswork in parameter settings, **ensuring safe and stable machining**.
- ✓ Intelligent parameterization ensures **consistent machining quality**, achieving finished product standards even in the prototyping phase.

# iMachining

Revolutionizing CAM: From guesswork to intelligent automation for optimal cutting parameters

## iMachining - Revolutionary CNC Machining Technology

Consolidate the knowledge and experience possessed by hundreds of experienced CAM and CNC engineers into a unified entity.

- ✓ **Save 70%** or even more machining time.
- ✓ **Double the lifespan** of tools through balanced usage.
- ✓ Harness the power of patented processes for **optimal feed rates and speeds**.
- ✓ Experience mind-blowing results with iMachining - **saving time, boosting efficiency, and maximizing profits!**

TIME SAVINGS  
**70%**  
... AND MORE!

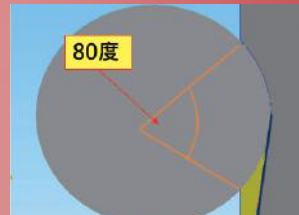
## Maximize your Machining Profits

**iMachining** boosts profits by Reduce Tooling, Machining Time, and Machine Productivity.

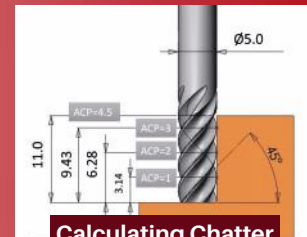
- ✓ **Deep machining reduces feed cycles:** Intelligent parameters reduce tool breakage caused by guesswork, increasing depth per pass and machining efficiency.
- ✓ **Full-edge cutting:** Use the entire blade for part cutting, not just end milling.
- ✓ **Real-time residual material calculation:** Eliminate air cutting and unnecessary tool lifts, focusing solely on cutting the remaining material area.

## How does iMachining work?

- ✓ **Intelligent cutting parameters:** iMachining leverages AI neural networks and a vast database to calculate the best tool path and parameters by inputting material, geometry, tool, and machine data.
- ✓ **Contact angle-based stepover:** The tool-material contact angle determines stepover (Ae), ensuring uniform force distribution in tight spaces.
- ✓ **Tool vibration calculation:** Tool chatter, stability, and life are improved by calculating tool vibration based on the tool-material contact point.
- ✓ **Deformed spiral path:** The patented deformed spiral gradually adapts to the geometric shape of the machining feature, maximizing the tool-to-material cutting time ratio compared to traditional spiral paths and improving machining efficiency.
- ✓ **Intelligent separation:** This improves deformed spiral cutting for large-scale material removal and trench machining around islands or sidewalls.



Calculating Contact Angle



Calculating Chatter



Deformed Spiral Path



Smart Separation



## iMachining Wizard— Greatest intelligent machining !

**iMachining** helps **SolidCAM** users boost processing efficiency and gain a competitive edge.

- ✓ iMachining is the preferred and only true guide in the industry, **automatically setting feed rates, spindle speeds, cutting depths, and stepovers** tailored to your machining needs.
- ✓ The patented "**Stepover Calculation based on Contact Angle**" technology enforces cutting process guidelines.
- ✓ **iMachining** offers **8 adjustable machining levels**, allowing you to select the most suitable level based on factors such as **fixture setup, tool holding method, and machine conditions**.



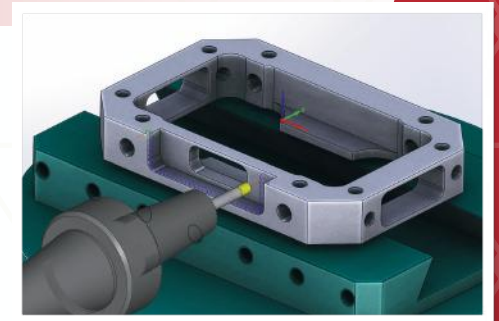
# Milling

Complete CAM Solution

## 2.5D Milling

### 2.5D CAM Milling Montours, Pockets, and Drilling

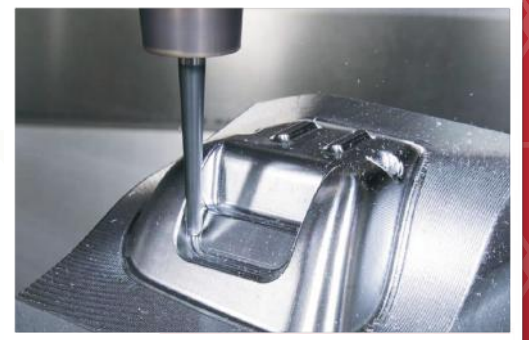
- ✓ **Image-guided programming:** An intuitive programming method that uses guided dialogs and visual prompts to create machining programs quickly.
- ✓ **Multiple machining strategies:** Supports chamfering, helical milling, and T-slot milling for different machining needs.
- ✓ **Rest material machining:** Automatic calculation of remaining material from previous tool passes streamlines machining and eliminates air cutting paths.



## HSS High-Speed Surface Processing

### Smooth, Air-Cut-Free Surfacing Strategies!

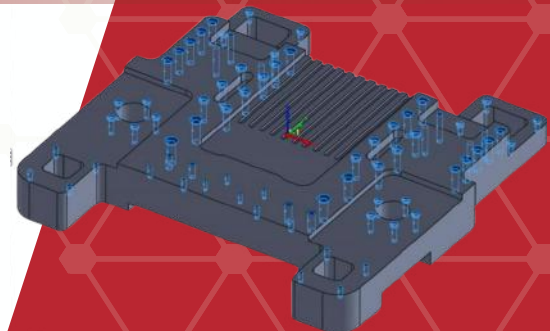
- ✓ **Multiple processing strategies:** Offering 12 surface processing strategies, including parallel projection, surface parallel, and profiling between surfaces, ensuring smooth and satisfactory surface quality.
- ✓ **Collision control:** Comprehensive collision control for toolholders, fixtures, and holders, along with multiple retraction strategies, allowing flexible and safe control over machining paths.
- ✓ **High precision:** Utilizing a high-precision surface path calculation core, achieving accuracy up to 0.002mm, meeting the requirements for high-precision curved surfaces such as automotive lamp mold A-level surfaces.



## Automatic Feature Recognition & Machining

### Automatic feature recognition eliminates the tedious process of manual program editing, making it simple and fast!

- ✓ **Cavity recognition:** Automatically identifies different types of cavities in the model based on height and depth differences, reducing programming time.
- ✓ **Chamfer recognition:** Automatically detects all sharp edges in the model that can be chamfered. Set the tool cutting diameter, safety offset, and chamfer depth.
- ✓ **Hole recognition:** Automatically recognizes through holes, counterbores, blind holes, and threaded holes in the model. This speeds up and simplifies drilling operations.



## HSR/HSM ( 3D High Speed Milling Module)



### Provide unique 3D path machining strategies, elevate 3D machining!

✓ **HSR** : Contouring, thin-walled, hybrid, and rest roughing provide a complete 3D roughing solution.

✓ **HSM** : 28 advanced surface finishing strategies generate optimal tool paths for complex surfaces, simplifying software configuration and product design.

✓ **Comprehensive surface module**: HSR and HSM surface machining capabilities easily handle complex molds, aerospace components, and high-end medical devices.

## Multi-axis fixed Machining



### SolidCAM offer the best and simplest program editing!

✓ **Easy coordinate system definition**: Multi-sided part program editing is easy with a coordinate origin and a click.

✓ **Support for multiple controller languages**: AutoCAMIN offers controller post-processors for coordinate transformation plane definitions.

✓ **Simple programming**: No special functions or skills required for programming multi-sided parts.

## Five-axis Simultaneous Machining



### Five-axis simultaneous machining for safe and efficient cutting!

✓ **Multiple 5-axis machining** : 27 simultaneous machining strategies enable precise path planning for complex surface machining.

✓ **Automatic collision avoidance** : Provides multiple collision avoidance strategies for fixtures and tool holders. Real-time collision checks are available in machine simulation.

✓ **Flexible axis control**: Controlling many axes, notably for aircraft components, complicated molds, or medical equipment prone to interference, guarantees high-quality machining while safeguarding tools and machines.

## Special Processing Module (SPM)

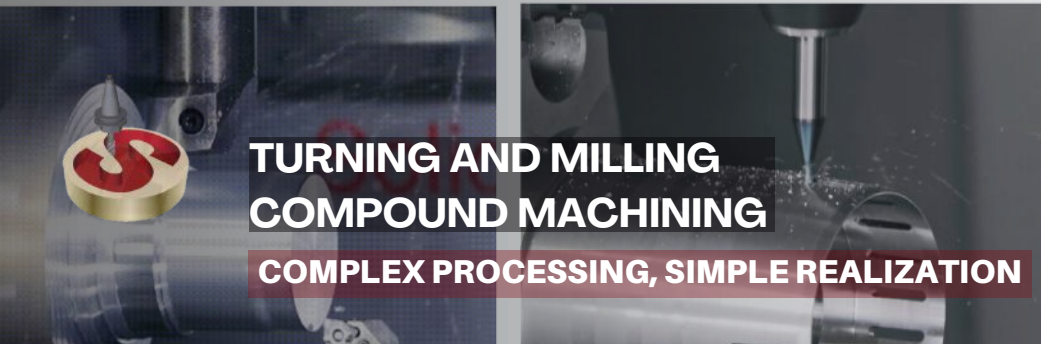
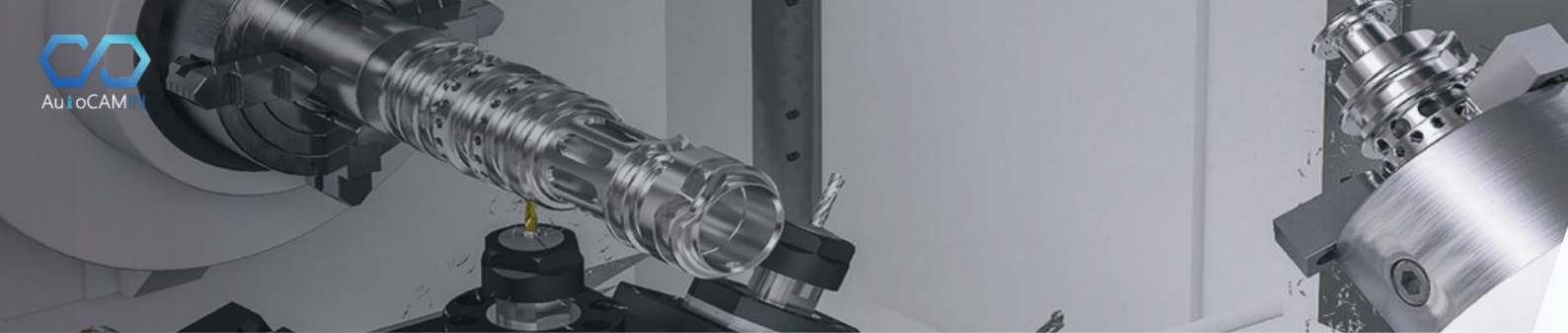


### SPM Simplifies Program Editing and Setting!

✓ **Tube bending**: Swarf cutting allows fast and safe machining of complex bent tubes like engine exhaust passages.

✓ **Impeller machining**: Modular impeller and blade machining simplifies complex blade roughing and finishing.

✓ **5-axis automatic chamfering**: Selecting part geometry generates fully automated chamfer tool paths with automatic feature detection, rapid motion linking, tool approach and retraction, and tool collision detection.



## TURNING AND MILLING COMPOUND MACHINING

COMPLEX PROCESSING, SIMPLE REALIZATION



### Turning

#### Effective, Precise, and Stable Turning Solution!

✓ **Multiple processing strategies:** To meet various processing needs, the turning module includes face turning, outer diameter turning, inner diameter turning, tooth turning, and Grooving.

✓ **Tool management:** Store and manage tool information. Complete advanced tool management system speeds up tool arrangement.

✓ **Turning simulation:** Comprehensive turning simulation function, which can instantly preview the tool movement trajectory and determine process interference.



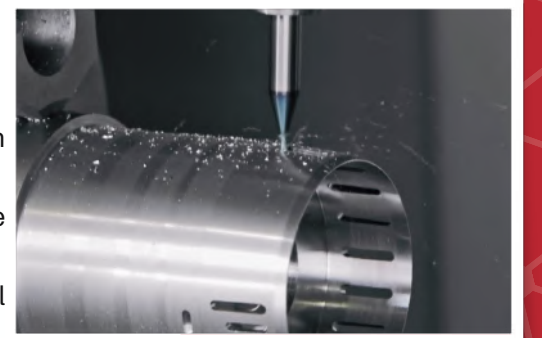
### Single Turret Turning and Milling Compound

#### The same interface simplifies and speeds up turning and milling!

✓ **Turning and milling operations:** Turning and milling operations are done in the same interface, improving program editing efficiency and accuracy.

✓ **Polar coordinate support:** For Fanuc, Mitsubishi, and other controllers, we offer post-processors that output G-Code in polar coordinate format.

✓ **Easy operation for cylindrical Mapping:** It's easy to get cylindrical coordinate paths for related machining operations.



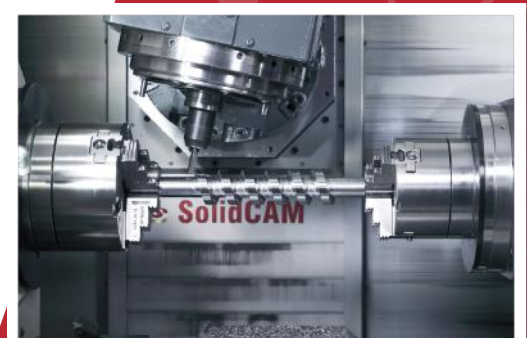
### Advanced Milling-Turning Compound

#### Multi-turret/multi-spindle milling and turning!

✓ **Comprehensive Milling :** Allows the use of various milling strategies such as iMachining for roughing or HSS surface finishing, providing the optimal machining solution based on different machines or scenarios.

✓ **Extensive machining settings:** Easily programs milling and turning operations for main spindle, sub-spindle, turret, powered tool holders, tailstock, and steady rest.

✓ **Multi-turret machining:** Programming and simulating collision-free paths for multiple turrets and spindles ensures optimal component machining.



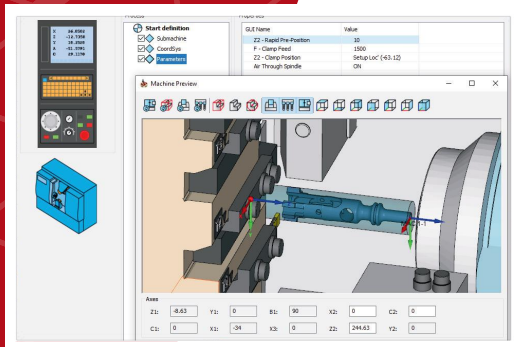
## Swiss Type -Turning and Milling Compound



### Program editing solves complex surface processing issues!

- ✓ **Surface chamfering:** A single interface can machine C-chamfers and R-chamfers on surfaces, improving program editing efficiency.
- ✓ **Milling format switching:** SolidCAM's simple settings let users choose the "XC or YC" milling format based on main and sub-spindle configuration.
- ✓ **Support for multiple machine models:** SolidCAM supports post-processing for Citizen, STAR, and Tsugami Swiss-type turning and milling machines.

## Machine Control Operation ( MCO )



### MCO Tells every Processing step!

- ✓ **Define all machine actions:** MCO lets you define machine actions beyond cutting paths, such as turret and spindle movements, material feeder opening/closing, coolant operations, and more.
- ✓ **Customized operation actions:** Standard MCO cycles (tool changes, main/sub-spindle alignment, bar feeding, etc.) can be customized to meet customer needs in the post-processor.
- ✓ **Full process simulation:** MCO simulates machine cycles. Before machining, you can understand machine movements, giving you peace of mind.

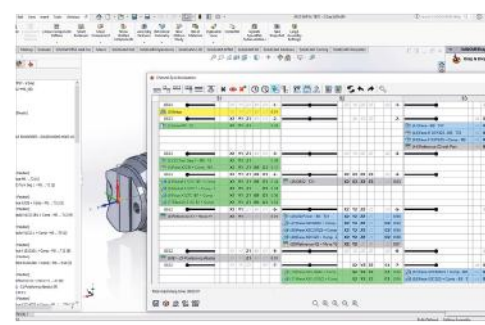
## ToolKit - Tool Manager



### It can load, assemble, manage, and switch tool configurations!

- ✓ **Define any tool:** You can define tool components by importing 3D STL files.
- ✓ **Quick tool setup:** Save power turret and tool machining settings, positions, and images for easy selection and editing in future tool use.
- ✓ **Tool setup with machine simulation:** Install angular heads, oil groove tool holders, milling cutter orientations, and lathe tool angles in the software. Use full machine simulation to instantly confirm the tool's direction and ensure software settings match the machine.

## Operation Sequence Manager



### Channel Sync Manager simplifies multi-channel issues!

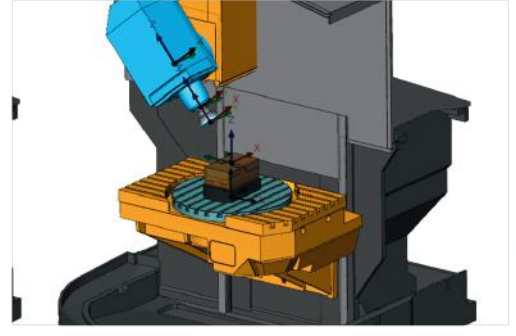
- ✓ **Axial collision detection:** Axial collision issues in synchronized channels will prevent G-Code or simulation generation, ensuring safety during machining.
- ✓ **Simple and clear job scheduling:** Organizing multi-channel processes with the Synchronous Channel Manager speeds up program editing.
- ✓ **Accelerated machining cycle time:** List scheduling optimizes machine utilization and machining cycle time by evaluating processing time in each channel.



## SolidCAM Full Model

### SolidCAM simulates collisions to ensure safe processing

- ✓ **Collision detection:** Use simulation to detect collision issues and ensure machining safety.
- ✓ **Highly realistic simulation effects:** Simulate all machining process details, like machine and tool movements, cutting conditions, etc. It predicts if interference will happen during machining.
- ✓ **Support for multiple machine models:** We provide full machine simulation and collision detection for popular brands like Mazak, DMG, Citizen, STAR, and other complex machine models.



## iMachining2D , iMachining3D

### Changing cutting parameters from human guessing to intelligent automation!

- ✓ **AI intelligent parameters:** The AI neural network calculates the optimal feed rate, spindle speed, cutting depth, and stepover for your machining process based on material, geometry, tool, and machine data.
- ✓ **70% efficiency improvement:** Save time and money by cutting machining time by 70% and doubling tool life.
- ✓ **iMachining guide:** Allows you to choose from 8 adjustable machining levels based on fixture, tool holding method, and machine condition.



## Technical Services

### To maximize SolidCAM's efficiency, We offer comprehensive technical services!

- ✓ **Software training:** Our comprehensive training courses and tutorial videos help customers quickly learn and master the software's usage techniques and best practices.
- ✓ **Technical support:** Customers can reach our technical support team via email, phone, or LINE for immediate assistance.
- ✓ **Skill enhancement:** To offer the best machining and software tips, we attend training sessions at the original manufacturer to improve our professional skills and service quality.



### SolidCAM - Planning the best machine solution

- |                       |                                |
|-----------------------|--------------------------------|
| OFFERS THE BEST TECH  | INCREASED USER COMPETITIVENESS |
| UNRESTRICTED THINKING | INNOVATION AND CREATIVITY      |

# Software Options: Explore Our Range of Solutions

## SolidWorks OEM Bundled

SolidWorks Parts Only  
SolidWorks PA  
SolidWorks Standard  
SolidWorks Professional

## SolidEdge OEM Bundled

SolidEdge OEM Basic (Parts & Drafting)  
SolidEdge OEM Standard (Parts & Drafting & assembly)

## SolidCAM Modules

SolidCAM Milling (2.5D milling module)  
+iMachining 2D  
+ iMachining 3D  
+ iMachining 2D up to 3D  
+ Feature recognition  
+ 3D HSM module  
+HSS module (Simultaneous 3 axis)  
+HSM Rough milling module - HSR  
+ Upgrade from HSR to full 3D HSM milling  
+ Simultaneous 4 axis (includes Rotary)  
+ SolidCAM SIM5X Standard  
+Edge Breaking  
+Edge Trimming  
+ Screw Machining for Simultaneous 5 axis  
+ Multi Axis Roughing for Simultaneous 5 axis  
+Multi-blade machining  
+ Port machining  
+Turning

## SolidCAM Turning

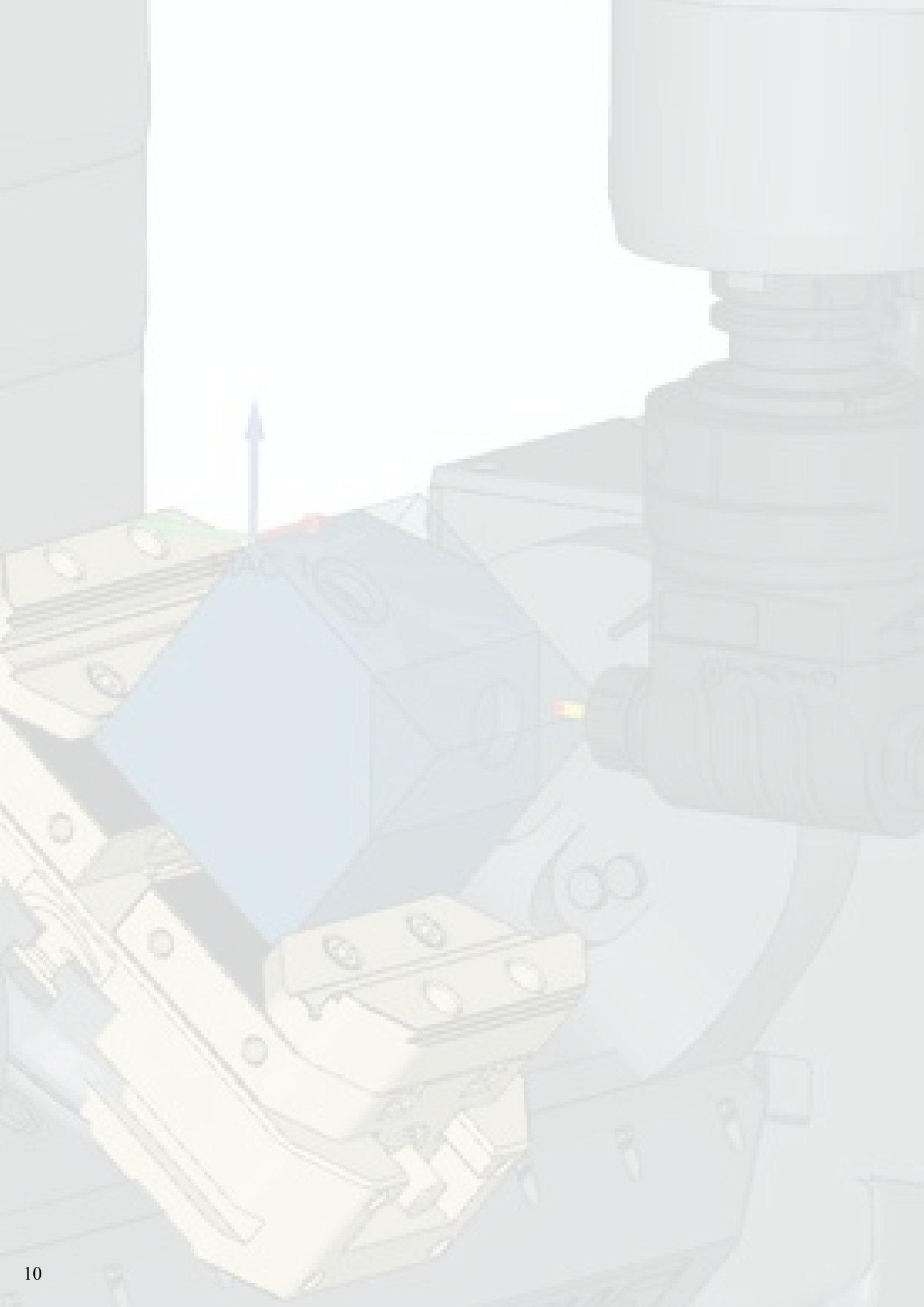
+Multi-Turret Synchronization  
+Swiss Type  
+Machine simulation

## Solid Probe

Solid Probe Level 1 - Home Position  
Solid Probe Level 2 - Home Position & Measurement

## Special Package (Includes one year update)

SolidCAM Mill 3D(2.5D+AFRM+HSS+HSR+SolidWroskStand)  
SolidCAM Full Mill 3D(2.5D+HSS+HSM+SolidWroskStand)  
SolidCAM 2.5D+AFRM+iMachining 2D+SolidWroskStand)  
SolidCAM Mill 3D (2.5D+AFRM+HSS+HSR+ SolidWroskStand)+iMachining 2D  
SolidCAM Full Mill 3D (2.5D+HSS+HSM+SolidWroskStand)+iMachining 2D  
SolidCAM M25 + SW Part Only + A\_Turning + HSS + Msim + Subs (1st year)  
SolidCAM M25 + SW Part Only + A\_Turning + HSS + S\_Type + Msim + Subs (1st year)





**AutoCAMIN**  
Research and Technology PVT LTD

**SolidCAM**



### **TOOLS**

We offer a comprehensive range of tools and Toolpath Design tailored to your CNC machine operations, meeting your specific requirements.



### **SolidCAM**

SolidCAM, a leading Integrated CAM solution, is widely recognized for its powerful and effective integration. Additionally, we offer sales and support services for **SolidWorks** and **Solid Edge**.



### **OCTOPUZ**

Octopuz, a versatile Robot Programming Software, provides efficient and precise solutions for industrial automation, enhancing our services.

