Swansoft CNC Simulation Software (ssCNC)

Swansoft CNC Simulator, is not just a simulator it is integrated software package that includes:

1. Realistic CNC machine simulator. Setup, program and operate various CNC machines in a virtual safe environment.

2. G-Code parser and debugger with advanced features like canned cycles and macros.

3. Server module to manage student’s access to the system, provide remote assistance and administer tests.

Main Features:
- Support for 2, 2.5 and 3 axis CNC machines
- Contains 65 systems and 119 control panels (more being added)
- Rendering using OpenGL for fast and accurate 3D modeling
- Realtime dynamic rotation, zooming, panning and switch views
- G-code parser with code validation supports G-codes and M-codes
- G-code debugging tool
- Capability to simulate canned cycles, macros and the inclusion of parameters
- Fanuc, Siemens polar coordinate programming, G02, G03 spiral interpolation
- Support for custom codes and cycles in different NC systems
- Simulates post-processed files from UGS, Pro-E and masterCAM
- Materials library, edit and insert new materials
- Workpiece setting and mounting
- Database management tools and tools customization
- Turret can be configured for 4, 8, 12 tools. The ATC can be horizontal/vertical
- Measuring tools: edge finger, feeler gauge, micrometers, calipers, etc.
- Roughness measurements based on cutting parameters
- Machine simulation includes like coolant, sound for machining operations and chips generation
- Automatic updates online
- Operation process recording and reply in AVI format
- And much, much more...

See it in action at: www.swansoftcncsimulator.com

Works with the most popular control panels
SSCNC: 3D CNC Virtual Machine and G-Code Simulator

More than 100 operator panels

Support for variables and parameters used to program macros

Multiple 3D model machines

Cutting path (2D) and 3D simulation for Lathe and Milling

G-Codes supported: Lathe

G-Codes supported: Milling

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SSCNC: 3D CNC Virtual Machine and G-Code Simulator

Extensive tool management capabilities for Milling and Lathe

Real time dynamic zooming and panning

Optical Edge Finder and Z-Axis gauge

Workpiece dimensions and roughness measurements

Workpiece and clamping configuration

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Server Features

When the software is installed on a local network in a server-client configuration it provides the instructor with the capability of managing students, classes and tests.

1. Users management
   Students are registered with a username and password. Once the student logs in from any computer in a local network the instructor can centrally manage, monitor and tutor the students.

2. Exercises management
   Add and edit exercises into server. Transmit exercises including pictures to client. Get answers from the clients.

3. Network Monitor
   Query students and control login, logout and machine operations. Broadcast screen information to the students and remotely assist them via remote view and control of client PC.

4. Examination subsystem
   Question library management, test paper management, the test process management as well as the examination paper automatic marking.

5. Test Administration subsystem
   Test data management, exam permit management and test results management.

Hardware and Software Requirements

- Runs on Windows Environment - 2000, XP, Vista, Win 7
- LAN network required to use the server functionality
- Processor 1.0 GHz minimum, 1.5 GB recommended
- 600 MB of hard disk space for program installation
- VGA graphics card capable of 1024x768 resolution, recommended support for OpenGL
- Multilingual Software - Portuguese, English, Chinese, Turkish, Korean and Polish.

Customization*

The panels and systems can be customized according to your needs. Most of the time the only thing that is required are some pictures and the panel’s manual. Also has the ability to model the 3D machine (the machine with which you have) so that along with the control, the result is as real as possible. New systems and panels are being added constantly and updates are free of charge.