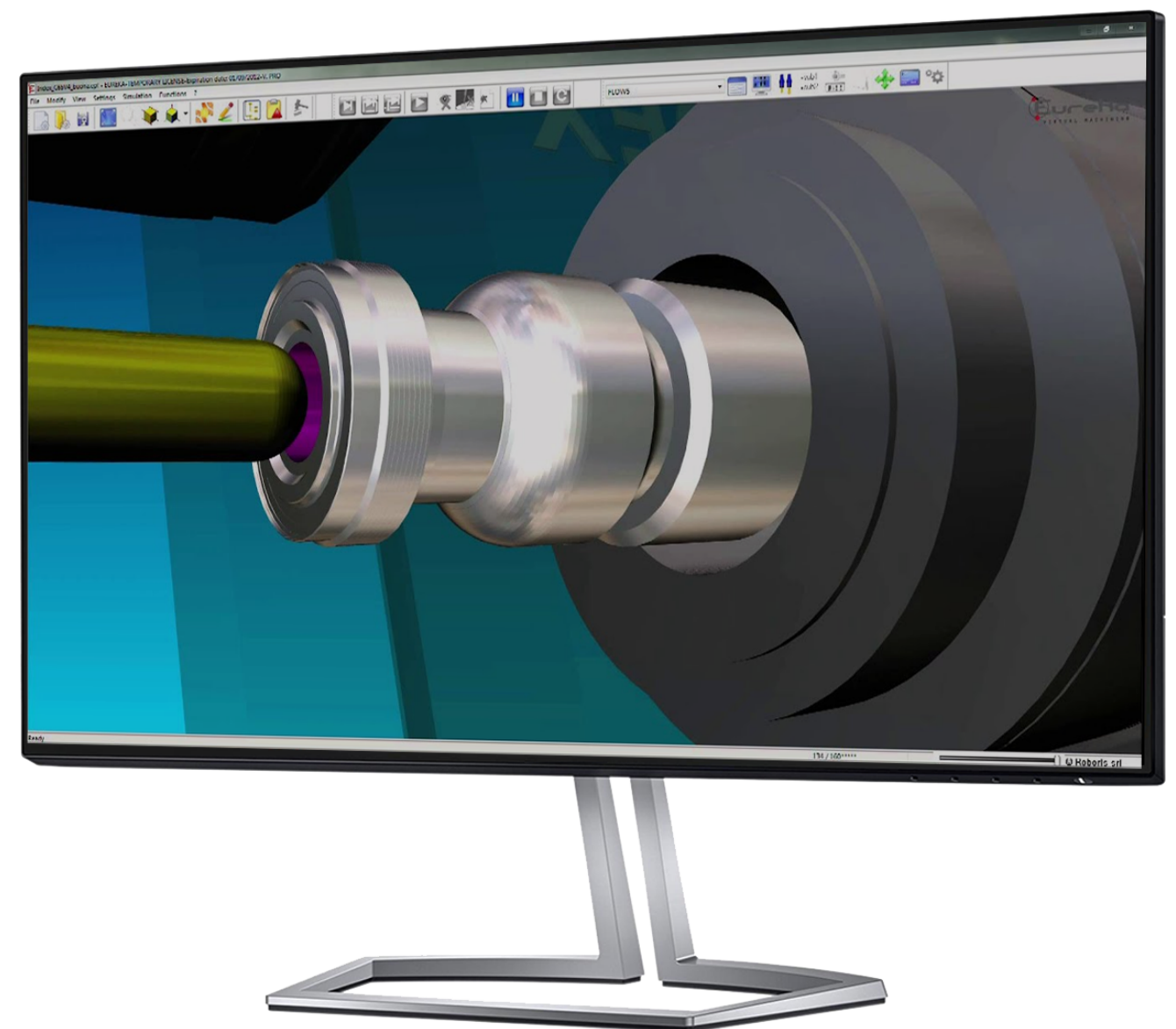




Simulation Software
for CNC Machines

Eureka **G-CODE**

- **SIMULATION OF THE POSTPROCESSED NC PROGRAM**
- **REALISTIC 3D MACHINE SIMULATION**
- **INTERACTIVE EDITOR**



Simulation Software for CNC Machines

Eureka integrates with other software applications through a rich set of COM based API's, compatible with the most popular programming languages to include **.NET, VB, C++, Delphi and VBScript.**

ACCURATE AND REALISTIC SIMULATION

Eureka simulates the **actual G-Code** to be sent to the machine, regardless of how it was created (manually or post processed from a CAD system).

With no additional customization, it emulates **all of the most popular CNC** controls, including Fanuc, Siemens, Heidenhain, Haas, Fagor, Okuma, MoriSeiki, Mazak, Fidia, Selca, Osai, Num and more.

Material removal is simulated in real-time, verifying errors like rapid motion contacts and collisions with the design model and fixtures.

COMPLETE ANALYSIS OF THE RESULTS

Dimensional analysis on the machined stock. Easily measure diameters, thickness and distances.

Comparisons between machined stock and CAD design model. Identify gouges and excess material in 3D to enable analysis from any point of view.

Export the machined stock as a high-quality 3D file compatible with any CAD system.

Standard and/or user defined reports in PDF or Excel formats. Use reports to prepare quotes or optimize the machining process.

CAD/CAM AND TOOL DATA MANAGEMENT SYSTEMS INTEGRATION

Transfer machining toolpath, tools, stock, design model, origins and fixtures from your CAM system to Eureka with just the push of a button.

Supported systems:

- ALPHACAM
 - CAMWORKS
 - CATIA
 - CIMATRON
 - CREO
 - EDGECAM
 - FEATURECAM
 - ESPRIT
 - GIBBSCAM
- GO2CAM
 - HYPERMILL
 - MASTERCAM
 - NX
 - POWERMILL
 - PRO-MANUFACTURING
 - RTM
 - SOLIDCAM
 - SUM3D
- TDM
 - TEBIS
 - TOPSOLID
 - VISI
 - WINTOOL
 - WORKNC
 - ZOLLER TMS
 - ZW3D

Eureka provides an advanced **tool assembly procedure**, which is very efficient when starting from 3D models of tool components. The tool components library is extended to **include any combination of cutting and non-cutting parts**, which simplifies using the tool assembly window.

Eureka is also useful for **training new personnel and teaching NC programming to students.** NC programs for any kind of machine and control can be designed and verified with Eureka, even when the real machine is not available.

Eureka provides more than just simulation. It **analyzes machining results** under many scenarios to **detect and remove mistakes**, reduce production time, while providing machining process reports and time summary sheets.

MAIN FEATURES

- Simulation of multi-channel, mill-turn machines.
- Powerful integrated editor to make real-time modifications of the NC code directly in Eureka, then simulate again without restarting the process.
- Material removal simulation.
- Simulation of tool change, head change and pallet change.
- Emulation of all control functionalities:
 - G codes and M functions.
 - Coordinate systems.
 - Tool radius and length compensation.
 - Drilling cycles, multiple cycles.
 - Logical instructions.

- Real-time collision detection between all machine parts, stocks and fixtures.
- Interactive and automatic tools to insert or modify Approach and Retract movements between operations.
- Emulation of Probing Routines.
- Tool length optimization feature to calculate the minimum tool length for preventing collisions.
- Real-time visualization of coordinate systems and tool reference points.
- Verification of over-travel limits JOG and MDI functionalities.

Eureka saves production time eliminating the need to test the program on your machine. Potential errors such as collisions, over travels and gouging, can be easily detected ahead of time on your PC.

Available for: Windows XP/Vista/7/8/10 32 e 64 bit

MULTI-CHANNEL MILL-TURN MACHINES

- Unlimited axes.
- Continuous 5-axis and simultaneous mill-turn machinings on different spindles and workpieces.
- Multiple repetitive cycles emulation (G71, G72 for Fanuc and CYCLE93-CYCLE95 for Siemens 840D).
- Mill-turn machining toolpaths using Z, X and C axes or Z, X and Y axes (G112 for Fanuc and TRANSMIT for Siemens840D).
- Automatic workpiece transfer to pick-off or sub-spindles.
- Accurate management of bar feeders and sliding headstock machines.

PRODUCTION MACHINES

- Machining simulation with multiple workpieces, pallets and program zeros.
- Accurate emulation of the Fanuc and Siemens G-codes including logic and mathematical functions.
- Tilted work planes simulation (G68.2, PLANE SPATIAL, CYCLE800).
- Simulation of tombstones, tool changes and probing cycles.
- Tools defined by parametric models, starting from a 2D profile or 3D model.
- Direct import of tools from CAD/CAM systems and from tool management applications.
- Import/Export of the presetting table in Excel format.

EUREKA PRIVATE CLOUD
AUTOMATIC SIMULATION SERVICE

Eureka Cloud is a simulation service which provides a complete automation of the design-to-production workflow. Any CAD/CAM operator can simply export simulation jobs to a shared folder that is monitored by Eureka Cloud. Eureka Cloud will automatically simulate the new data and send results by email.



EUREKA VIEWER

Any simulation can be received and analyzed on any Windows Computer using Eureka Viewer, available free of charge. Ideal to be used in the shop floor or to share simulations with customers and suppliers.

