# IMSce™ for Mastercam™
CNC Controller Emulation

Overview

IMSce for Mastercam provides complete CNC controller emulation functionality to add G-code simulation and verification to the Mastercam machine simulation solution. Together the solution provides machine collision detection, gouge detection and warnings of syntax and logical errors in the machine code.
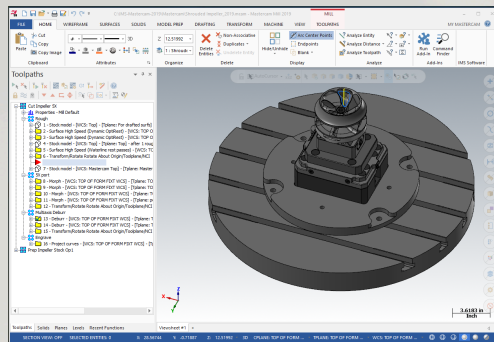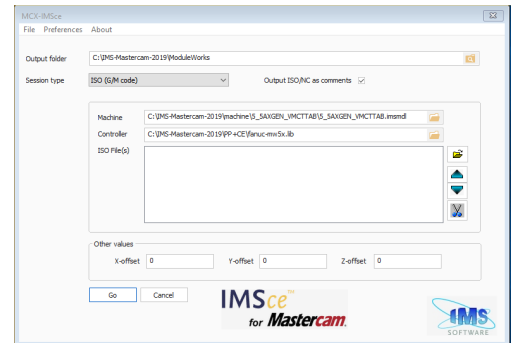

Verify G-code, not APT

Most CAM software provides NC verification with material removal, and in some cases machine simulation, but normally only checks the toolpath generated by the software. What happens between the CAM system and the machine - postprocessing to convert the toolpath to the correct format, optimization for speeds, feeds, retraction and reorientation at machine limits, or simply hand-editing by the operator - can introduce conditions that can be costly if not identified before the part is on the machine.

Controller Emulation

IMSce for Mastercam provides robust controller emulation for all types of CNC controllers on the market today, including Fanuc, Siemens, Heidenhain (ISO and conversational formats), Fadal, Num, Mazak and many others. Full support for controller variables, subprograms, expressions, canned cycles, probing and more ensure the most accurate and robust simulation available in the industry.
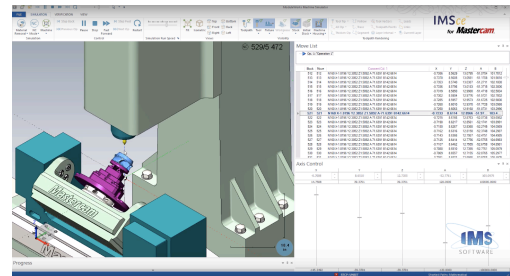
Extends the Mastercam Machine Simulation Solution

IMSce for Mastercam connects directly to the Mastercam machine simulation architecture, adding G-code parsing capability with the proven IMSce solution. This leverages the robust library of available solutions as well as the extensive enginering resources of the IMS Software team.

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Virtual CNC Controller

The virtual CNC controller pioneered in IMSpost is the heart of IMSce for Mastercam. Complete processing of the machine code provides a true picture of the tool motion.

IMSce for Mastercam includes support for all controller functions, including:

- Cutter compensation (2D & 3D)
- Tool length compensation
- Rotary axis pivot points
- Controller subroutines
- Controller variables and expressions
- Canned cycles
- Working planes

The virtual controller provides support for NC controls from all major manufacturers, including:

A-B	K&T
BOSCH	MAZAK
CINCINNATTI	NUM
EVOLUTION	OKUMA
FADAL	SELCA
FANUC	SHARNOA
FIDIA	SIEMENS
GE	TOSHIBA
G&L	YASNAC
HEIDENHAIN	*and others*

Supported Platforms

- Intel/AMD 64-bit computers with:

  - Windows 7
  - Windows 10

An Architecture Optimized for CNC

Related Products

IMSpost™

IMSpost™, the worlds most advanced postprocessing software, transforms CAD/CAM cutter location (Clfiles) into the specific machine codes (G/M codes) required by NC machines. IMSpost works seamlessly with all major CAD/CAM systems, hardware platforms, and NC machines, in one easy to use interface.

IMSverify™

Full-function, solids-based CNC verification with full machine simulation.

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