Mastercam®
Family of Products

Cutting Anything. Everywhere.

REPRESENTED BY:
Allegheny Educational Systems, Inc.
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Natrona Heights, PA 15065
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Why Choose Mastercam?

There is no job more important than the one you're working on. Mastercam X7 expands the world's most widely-used CAD/CAM* software to ensure you always have the precise tool you need.

- **Streamlined.** A remarkably easy interface has you cutting parts quickly.
- **Comprehensive.** Get the most robust 2- through 5-axis toolpath generation available.
- **Time-saving.** Mastercam’s Dynamic Milling technology cuts machining time and tool wear.
- **Smart.** Intelligent toolpaths and design Change Recognition know when your part has been edited.
- **Automated.** Feature-Based Machining delivers push-button 2D programming.

*Source: CIMdata, Inc.

**MILLING**

**Mastercam Mill**

**Mastercam Mill Level 1**

Associative CAD/CAM for 2½-axis machining and design. Includes Design functionality, plus:

- Streamlined tool manager.
- Automated 2D Feature-Based Machining on solids.
- Flexible contour, pocket, and drilling.
- CAD File Change Recognition.
- Highly efficient Dynamic Milling.
- Tombstone programming/multiaxis positioning.
- In-process stock model.
- Solids-based toolpath verification.

**Mastercam Mill Level 2**

Associative CAD/CAM for limited 3-axis machining and design. Includes Design and Mill Level 1 functionality, plus:

- Single surface and limited multisurface finishing.
- Single surface and limited multisurface roughing.
- Toolpath projection onto a complex surface.

**Mastercam Mill Level 3**

Associative CAD/CAM for full 3-axis machining and design. Includes Mastercam Design, Mill Level 1 & 2, plus:

- Comprehensive, easy, and associative multisurface roughing and finishing.
- High Speed Machining efficiently cuts complex parts.
- OptiRough dramatically reduces roughing time.
- Remaining stock removal.
- Machine surfaces, solids, STL files, and wireframe.

**Mastercam Mill Multiaxis (Add-On)**

Associative CAD/CAM for multiaxis machining that adds on to Mastercam Mill Level 3 or Mastercam Router Pro.

- 4- and 5-axis multisurface roughing and finishing.
- 5-axis contour cutting and trimming.
- Full control over all aspects of tool approach, motion, and retract.
- Full multiaxis solids-based verification.

**MODELING**

**Mastercam Design**

Powerful 3D CAD software also included in Mastercam Mill, Lathe, Router, and Wire.

- Easy geometry modeling and editing.
- Advanced geometry creation, including NURBS curves and surfaces.
- 2D and 3D associative dimensioning.
- Surface extension, blending, trimming, splitting, and variable filleting.

* Additional Add-Ons Available. See back for more info.
**TURNING**

**Mastercam Lathe**
Associative CNC programming system for turning. Builds on Mastercam Design, plus:
- Automatic tool compensation.
- Solids-based toolpath verification.
- Editable tool, material, and operation libraries.
- Roughing (including Dynamic), finishing, threading, grooving, boring, drilling, and cut off.
- C- and Y-axis machining, with full multiaxis when combined with Mastercam Mill.

**MULTI-TASKING**

**Mastercam Mill-Turn**
Powerful solution that combines with Mastercam Mill and Mastercam Lathe for efficient mill/turn machining.
- Streamlined workflow simplifies complex operations.
- Full synchronization across unlimited data streams.
- Complete machine and part simulation.

**Mastercam Swiss Expert**
Stand-alone software specifically designed for programming Swiss machines.
- Solids-based programming and machine simulation.
- Specialized toolpaths and synchronization designed for Swiss machines.

**INTEGRATED SOLUTIONS**

**Mastercam® for SolidWorks®**
Fully integrated CAM that runs directly within SolidWorks 2011 or later. Available for milling, turning, or both combined.

**Milling Features**
- Streamlined 2- through 5-axis programming, including Feature-Based Machining.
- High speed and Dynamic toolpaths save time and tool wear.

**Turning Features**
- Fast roughing (including Dynamic), and finishing.
- Threading, grooving, boring, drilling, cut off, and more.

**WIRE EDM**

**Mastercam Wire**
Associative CAD/CAM for wire EDM. Builds on Mastercam Design, plus:
- Advanced tapering in both 2-axis and 4-axis wirepaths.
- Advanced synchronization capabilities.
- Efficient lead-ins and lead-outs.
- Automatic corner filleting and skim cut definition.
- Efficient tab creation and management.
- Wirepath filtering significantly reduces program size.

**ROUTER**

**Mastercam Router**
Associative CAD/CAM specifically designed for router. Builds on Mastercam Design, plus:
- Mastercam Router delivers flexible 2D machining including aggregate head support, drill block support, multiple head support, nesting, engraving, and tab control.
- Mastercam Router Plus adds single surface and limited multisurface roughing and finishing.
- Mastercam Router Pro adds full multisurface roughing and finishing and fast cleanup machining.
Powered Mastercam Add-Ons

Mastercam Add-Ons are custom utilities developed for specialized applications. These time-saving tools deliver highly focused modeling, machining, inspection, and more.

+ **Mastercam Solids**
  Fully integrated Parasolid*-based solid modeler that adds in to Mastercam Design, Mill, Lathe, Router, and Wire.
  • Powerful solid construction techniques.
  • Fast shelling, filleting, and chamfering.
  • Import and export Parasolid files.
  • History tree for easy operation editing.
  • Combine solids and surfaces in the same model.
  • Fully integrated, associative machining when combined with Mastercam Mill.
  • Easily remove and/or modify solid features, even on a dumb solid.
  • Quickly create axis lines on circular holes in Solids to aid in multi-axis drilling.

Productivity+™

Fully integrated version of Renishaw’s® Productivity+ probing and inspection utility.
• Automates part setup including tool length offsetting, fixture alignment, and more.
• In-process inspection checks sizes and can adjust offset and recut undersized features.
• Create detailed in-process inspection reports.
• Check for tool breakage during unattended machining.

+ **Mastercam Port Expert**
  Specialized multi-axis programming for precision head porting that provides dramatically faster port programming and machining time, along with smoother toolpath motion. Adds in to Mastercam Mill Level 3 or Mastercam Router Pro.

+ **Mastercam Blade Expert**
  Specialized package dedicated to cutting multi-bladed parts and hubs. Adds in to Mastercam Mill Level 3 or Mastercam Router Pro.
  • Specialized motion ensures clean cuts in splitters and leading / trailing edges.
  • Complete tools for roughing between blades, semi-finishing and finishing the blades, and finishing the hub.

+ **Curve and Drill 5-Axis**
  Basic 5-axis cutting for trimming and drilling operations that can be added to Mill Level 1 for a cost-effective multi-axis package.

+ **Mastercam Art**
  Artistic CAD/CAM for creative organic modeling and machining. Quickly bring 2D sketches, clip art, photos, and CAD files to life by crafting them on screen and cutting them with easy, specialized toolpaths.

+ **Mastercam Engrave**
  Easy-to-use utility that gives you a classic handmade finish.
  • Create a hand-carved look with NC precision and repeatability.
  • Program and preview a variety of engraving techniques.

+ **Mastercam Nesting**
  Efficient nesting add-in that maximizes material use.
  • Efficient TrueShape interlocking nesting.
  • Save scrap geometry for later use.
  • Filler parts, labeling, grain management, and more.

+ **Mastercam Direct**
  Free add-in that puts a Mastercam launcher directly in your SolidWorks, SolidEdge, or AutoCAD Inventor toolbars. With one click you can launch your current part in Mastercam, ready for programming.

Data Translators

IGES, Parasolid®, SAT (ACIS solids), AutoCAD® (DXF, DWG), Autodesk® Inventor® (IPT, IAM), SolidWorks® (SLDprt, SLDasm, SLDDRW), Solid Edge®, STEP, EPS, CADL, STL, VDA, and ASCII translators included. Direct translators for CATIA®, Pro/E®, and more.

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And Many More . . .

Mastercam Business Partners offer a wide variety of additional time-saving tools for Mastercam. These include core/cavity separation, EDM tool creation, learning tools, and many more.

Visit Mastercam.com for details.

30 Years
Cutting Anything. Everywhere.

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