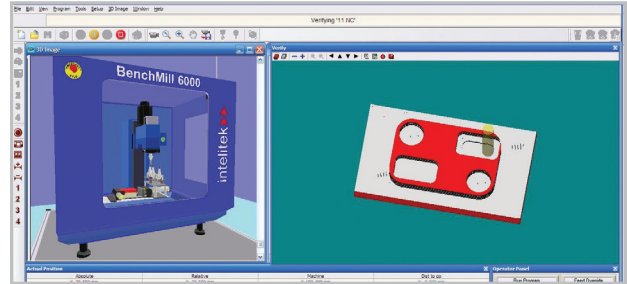




# CNCBase & CNCMotion CNC Machine Control Software

Intelitek's CNC control software is an ideal tool for learning the fundamentals of CNC machining. CNCBase has a user-friendly interface and its online help enables users of all levels learn to write NC programs and operate CNC machines. CNCMotion integrates interactive 3D simulation with CNCBase for dynamic simulation and graphic tracking of CNC mills and lathes. The software accepts standard FANUC-compatible EIA RS274D G&M codes.



## CNCBase®

### Standard Features

- Programming and control
  - ◇ EIA RS274-D standard G&M code compatibility
  - ◇ CAD/CAM compatibility
  - ◇ Advanced NC code editing functions, including automatic block numbering, comment management and code verification
  - ◇ Absolute and incremental programming
  - ◇ Canned cycles for drilling & boring
  - ◇ Programmable tool offsets & cutter compensation
  - ◇ Metric and imperial units
  - ◇ NC code color editor
  - ◇ Unlimited number of simultaneously open programs
  - ◇ Unlimited number of program blocks

- Programming verification
  - ◇ Quick verification of G&M code to ensure correct and complete syntax during program editing
  - ◇ Graphic verification of the tool path
  - ◇ Estimate Runtime command to calculate the approximate amount of time necessary to machine your part, and the approximate distance the machine travels
- Real-time data display
  - ◇ Real-time display of current hardware setup, including cross-slide and tool positions, tool in use, machining parameters
  - ◇ Real-time display of program execution, including block being executed and program run time

- Manual hardware control
  - ◇ Movement along each axis at customized speed and step settings
  - ◇ Spindle activation and speed control
  - ◇ Movement control from dialog box & keyboard
  - ◇ Manual override of spindle speed and feed rate
  - ◇ Configurable soft limits for safe machining
  - ◇ Parameters easily viewed & manipulated
  - ◇ Setup tool library
- Two operating modes:
  - ◇ Online: CNCBase communicates with the controller
  - ◇ Simulation: Offline, you can simulate the machining process with graphic verification and simulated machining

## CNCMotion®

### Standard Features

- Graphic setup
  - ◇ Interactive graphic setup enables customization of machines, including various machine tools and fixtures
  - ◇ Definitions and properties of clamps, vises and chucks; fixtures can be pneumatically or manually operated
  - ◇ Definitions and tool offsets for up to 20 predefined and user-defined tools
  - ◇ Definition of manual tool holders/posts, or automatic tool changer/tool turret
  - ◇ Definitions and properties of workpieces: material, color and size
  - ◇ Definitions verified during setup to ensure compatibility with actual hardware and physical environment
  - ◇ Tooling options and accessories simulated on-screen
- Dynamic 3D simulation
  - ◇ Dynamic simulation and graphic tracking of machine during manual operation and program execution
  - ◇ Simulates cross-slide, spindle & tool movements
  - ◇ Simulates in real time the changing form of work piece during the entire machining process

- ◇ Simulates real-world conditions, including axis limits, impact, automatic and emergency stops, and shield-engaged stops
- ◇ Enables experimentation with virtual parts of different shapes, sizes and materials, such as wax, brass, wood and aluminum
- ◇ Point & click workpiece origin definition
- ◇ Full control of feed rate and spindle speed during simulation
- ◇ Display of current tool coordinates and state of hardware components
- ◇ Control the display zoom, rotate, pan, drag, and redirect
- ◇ 3D tool path verification during machining
- ◇ Simultaneously display three different 3D views of the machine
- Programming and control
  - ◇ Fully integrated with CNCBase control software, an intuitive tool for programming and operating CNC machines
  - ◇ FANUC emulator replicates standard industry control. Switch between Intelitek and FANUC control with the click of the mouse

### Milling Options

- All standard-size tooling
- 4" precision vice
- Single axis air vise
- Dual axis air vise
- Clamping kit
- 4-station ATC for BenchMill 6100 or ProMill 8000
- 12-tool carousel ATC for ProMill 8000
- Rotary worktable (4th axis) with 3-jaw chuck
- Coolant system
- Lubrication system
- Automatic shield opener

### Turning Options

- All standard-size tooling
- 3-jaw chuck
- Air chuck
- 4-station automatic tool turret
- Tailstock
- Coolant system
- Lubrication system
- Automatic shield opener

## CNC Machine Control Software (continued)

### FANUC™ 21i Emulator

The FANUC 21i Emulator is an in both CNCBase and CNCMotion control software.

The FANUC emulator replicates the FANUC 21i CNC controller. This controller and its subset, the FANUC 16i and 18i controllers, are the popular CNC controls used in industry.

Whether you are operating the actual machine or the virtual machine simulator, you can teach industrial CNC controls in addition to the G & M codes offered on our CNC machines.

The FANUC 21i control and simulator are available for any of the following machines:

- BenchMill 6100 CNC Milling Center
- BenchTurn 7100 CNC Turning Center
- ProMill 8000 CNC Machining Center
- ProTurn 9000 CNC Turning Center

## Ordering Information

### CNC Software

CNCMotion® Simulation Software	63-6001-2000
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### CNC Machines (include CNCBase)

BenchMill 6100 - 110 VAC	00-5505-N110
BenchMill 6100 - 220 VAC	00-5505-N220
BenchTurn 7100 - 110 VAC	00-5504-N110
BenchTurn 7100 - 220 VAC	00-5504-N220
ProMill 8000 ATC - 110 VAC	00-5509-0110
ProMill 8000 ATC - 220 VAC	00-5509-0220
ProTurn 9000 - 110 VAC	00-5501-0110
ProTurn 9000 - 200 VAC	00-5501-0220

### CNC Bundles\*

BenchMill 6100 Starter Bundle, 110/220 VAC, Imp/Met	HW-BM6K-STRT
BenchMill 6100 Standard Bundle, 110/220 VAC, Imp/Met	HW-BM6K-STND
BenchMill 6100 Advanced Bundle, 110/220 VAC, Imp/Met	HW-BM6K-ADV
BenchTurn 7100 Starter Bundle, 110/220 VAC, Imp/Met	HW-BT7K-STRT
BenchTurn 7100 Advanced Bundle, 110/220 VAC, Imp/Met	HW-BT7K-ADV
ProMill 8000 Starter Bundle, 110/220 VAC, Imp/Met	HW-PM8K-STRT
ProMill 8000 Standard Bundle, 110/220 VAC, Imp/Met	HW-PM8K-STND
ProMill 8000 Advanced Bundle, 110/220 VAC, Imp/Met	HW-PM8K-ADV
ProTurn 9000 Starter Bundle, 110/220 VAC, Imp/Met	HW-PT9K-STRT
ProTurn 9000 Advanced Bundle, 110/220 VAC, Imp/Met	HW-PT9K-ADV

\*include machine, accessories, software and curriculum. See hardware data sheets for details.

### CNC Curriculum

LearnMate Content, Lab/Virtual, CNC Milling, Imp/Met	88-3147-0000
LearnMate Content, Lab/Virtual, CNC Turning Imp/Met	88-3148-0000



📍 18 Tsienneto Rd, Derry, NH 03038 USA

📞 603-413-2600

✉ info@intelitek.com

🌐 www.intelitek.com