Intellitek’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
  - Standard Windows functions for editing (e.g., cut, copy, paste)

- 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: When not connected, you can simulate the machining process with graphic verification and simulated machining

**CNCMotion®**

**Standard Features**
- 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

- 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 and 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 views of the machine

- 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

**Turning Options**
- All standard-size tooling
- 4” precision vice
- Single axis air vise
- Dual axis air vise
- Clamping kit
- 4-station ATC for BenchMill 6000 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

**Milling Options**
- All standard-size tooling
- 4” precision vice
- Single axis air vise
- Dual axis air vise
- Clamping kit
- 4-station ATC for BenchMill 6000 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
FANUC™ 21i Emulator
The FANUC 21i Emulator is an add-on option for 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 most 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 6000 CNC Milling Center
- BenchTurn 7000 CNC Turning Center
- ProMill 8000 CNC Machining Center
- ProTurn 9000 CNC Turning Center

Computer Requirements

CNCBase
- Windows XP SP3/Vista/Windows 7-32 or 64bit
- 512 MB RAM (1 GB Recommended)
- 200 MB of available hard drive space
- Available Ethernet port
- ATX power supply (Recommended)

CNCmotion
- Windows XP SP3/Vista/Windows 7-32 or 64bit
- 512 MB RAM (1 GB Recommended)
- 300 MB of available hard drive space
- Available Ethernet port (for online mode)
- ATX power supply (Recommended for online mode)

Ordering Information

CNC Software
CNCMotion® Simulation Software 63-6789-1000
FANUC™ 21i Emulator 63-6789-2000-FA

CNC Machines (include CNCBase)
BenchMill 6000 - 110 VAC 00-5505-0110
BenchMill 6000 - 220 VAC 00-5505-0220
BenchTurn 7000 - 110 VAC 00-5504-0110
BenchTurn 7000 - 220 VAC 00-5504-0220
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 6000 Starter Bundle, 110/220 VAC, Imp/Met CNC-6000-STRT
BenchMill 6000 Standard Bundle, 110/220 VAC, Imperial CNC-6000-STND-I
BenchMill 6000 Standard Bundle, 110/220 VAC, Metric CNC-6000-STND-M
BenchMill 6000 Advanced Bundle, 110/220 VAC, Imperial CNC-6000-ADV-I
BenchMill 6000 Advanced Bundle, 110/220 VAC, Metric CNC-6000-ADV-M
BenchTurn 7000 Starter Bundle, 110/220 VAC, Imp/Met CNC-7000-STRT
BenchTurn 7000 Advanced Bundle, 110/220 VAC, Imp/Met CNC-7000-ADV
ProMill 8000 Starter Bundle, 110/220 VAC, Imp/Met CNC-8000-STRT
ProMill 8000 Standard Bundle, 110/220 VAC, Imperial CNC-8000-STND-I
ProMill 8000 Standard Bundle, 110/220 VAC, Metric CNC-8000-STND-M
ProMill 8000 Advanced Bundle, 110/220 VAC, Imperial CNC-8000-ADV-I
ProMill 8000 Advanced Bundle, 110/220 VAC, Metric CNC-8000-ADV-M
ProTurn 9000 Starter Bundle, 110/220 VAC, Imp/Met CNC-9000-STRT
ProTurn 9000 Advanced Bundle, 110/220 VAC, Imp/Met CNC-9000-ADV

CNC Curriculum
LearnMate Content, Lab, CNC Milling w/ProMill 8000 77-8142-0001
LearnMate Content, Lab, CNC Milling w/ProMill 8000 (M) 77-8142-0002
LearnMate Content, Lab, CNC Turning w/ProTurn 9000 77-8143-0001
LearnMate Content, Lab, CNC Turning w/ProTurn 9000 (M) 77-8143-0002
LearnMate Content, CNC Program Mill FANUC Controller 77-3144-0001
LearnMate Content, CNC Programming Mill FANUC [Metric] 77-3144-0002
LearnMate Content, CNC Program Turn FANUC Controller 77-3146-0001
LearnMate Content, Virtual, CNC Milling w/FANUC 77-3105-0001

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

Contact Us:
intelitek

CNC Machine Control Software (continued)

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- Available Ethernet port (for online mode)
- ATX power supply (Recommended for online mode)

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BenchMill 6000 Standard Bundle, 110/220 VAC, Metric CNC-6000-STND-M
BenchMill 6000 Advanced Bundle, 110/220 VAC, Imperial CNC-6000-ADV-I
BenchMill 6000 Advanced Bundle, 110/220 VAC, Metric CNC-6000-ADV-M
BenchTurn 7000 Starter Bundle, 110/220 VAC, Imp/Met CNC-7000-STRT
BenchTurn 7000 Advanced Bundle, 110/220 VAC, Imp/Met CNC-7000-ADV
ProMill 8000 Starter Bundle, 110/220 VAC, Imp/Met CNC-8000-STRT
ProMill 8000 Standard Bundle, 110/220 VAC, Imperial CNC-8000-STND-I
ProMill 8000 Standard Bundle, 110/220 VAC, Metric CNC-8000-STND-M
ProMill 8000 Advanced Bundle, 110/220 VAC, Imperial CNC-8000-ADV-I
ProMill 8000 Advanced Bundle, 110/220 VAC, Metric CNC-8000-ADV-M
ProTurn 9000 Starter Bundle, 110/220 VAC, Imp/Met CNC-9000-STRT
ProTurn 9000 Advanced Bundle, 110/220 VAC, Imp/Met CNC-9000-ADV

CNC Curriculum
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LearnMate Content, Lab, CNC Milling w/ProMill 8000 (M) 77-8142-0002
LearnMate Content, Lab, CNC Turning w/ProTurn 9000 77-8143-0001
LearnMate Content, Lab, CNC Turning w/ProTurn 9000 (M) 77-8143-0002
LearnMate Content, CNC Program Mill FANUC Controller 77-3144-0001
LearnMate Content, CNC Programming Mill FANUC [Metric] 77-3144-0002
LearnMate Content, CNC Program Turn FANUC Controller 77-3146-0001
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