



DELTA TAU

Data Systems, Inc.

Advantage 810M

The Advantage 810 series of open architecture NC controllers is a MACRO based combination of hardware and software providing affordable, high-performance open-architecture CNC machine tool control solutions for the OEM and retrofit market. With the use of the MACRO fiber optic control ring for controlling both small and especially large machines.

The Advantage 810M NC control from Delta Tau consists of two main components, the Turbo PMAC PCI Ultralite high performance servo motion controller and 810 NC operator console. The Turbo PMAC PCI Ultralite motion controller is developed around Motorola Digital signal processor. This hardware combination, along with the included software, is an excellent solution for five axis or greater, milling, turning and special purpose machines such as laser cutting and water jet cutting.

The core of the Advantage 810 series is the Turbo PMAC, Programmable Multi-Axis Controller, delivering power, reliability and high precision for the motion control requirements of any CNC application. In the 810M version of the Advantage 810 series, the Turbo PMAC PCI Ultralite motion controller is provided inside the 810 console, and provides the MACRO Control Ring.

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The sleek design of the Advantage 810 operator's control panel in combination with the PMAC-NC software, delivers a very intuitive interface for executing NC part programs. The 810 console includes all of the standard operator controls, such as rotary switches for axes selection, user-definable buttons for customized I/O control, federate override, hand-wheel, spindle speed and mode select. The open-architecture PC-based design allows running any other Windows® compatible program, writing NC parts programs, reading programs locally or through an Ethernet network or even access the Internet.

The PMAC-NC software is provided with a rich set of software tools making the configuration of the machine a very simple process. These programs allow the optimization of the motor servo parameters for maximum speed and accuracy and also permit customizing the machine for the use of various motor types, brush, brushless, linear, stepper etc. Servo amplifiers digital inputs and outputs are supported. In addition, the PMAC-NC software and Turbo PMAC motion controller can be purchased separately, providing for the retrofitting of any existing CNC machine.

Delta Tau also offers several different servo amplifier sizes and options to complement the 810 NC systems.



Advantage 810



GEO MACRO



Advantage 810M

Hardware

- Modular Axis Expandability, up to 32 axes
- Modular I/O Expandability to 16384 Points
- 15" LCD Display
- 55µs Default Servo Update
- Sinusoidal Interpolation, SSI, etc.

Software

- Windows 2000 Operating System
- Lathe and Mill Software included
- RS-274 G-Code Language
- 5-Axis Interpolation
- Open PLC includes Tool Changer functionality
- Linear Circular and Helical Interpolation
- Advanced Segmented Block Lookahead
- 2000 blks/sec throughput

Features

- Powerful Dual Processor Control
- Fiber Optic or USB motion and I/O distribution
- Capable of 3000 Meters between stations with fiber
- 32-Axis coordinated motion
- 16,384 I/O points
- Unmatched selection of I/O accessories, feedback interpolation, etc.
- Ideal for complex and/or Large Machines

Connectivity

- Part program size only limited by hard disk space due to PC-based architecture and NC Control rotary buffer
- Ethernet and USB 2.0 interface included
- **MACRO** 128Mbit/sec Fiber Optic Distributed Network included



Overall Position					
	Program		Operator		Machine
X	0.0669	X	0.0669	X	0.0669
Y	0.2424	Y	0.2424	Y	0.2424
Z	0.4832	Z	0.4832	Z	0.4832
Commanded		Dist To Go		Follow Err	
X	0.0696	X	0.0027	X	0.0010
Y	0.2367	Y	-0.0057	Y	-0.0007
Z	0.4840	Z	0.0008	Z	0.0006

PMAC NC4.0