Easily configured UMAC

Offers Multitude of Motion and I/O Options

Delta Tau’s newest product line gives engineers versatility and high performance in a ruggedized, CE approved, 3U package.

DELTA TAU DATA SYSTEMS makes powerful, versatile, cost-effective motion controllers. They have been used to grind the corrective lenses for the Hubble Deep Space Telescope with sub-nanometer accuracy and have moved the 90% full-scale replica of the titanic for the blockbuster movie. They operate the world’s fastest pick-and-place machines, tools, assembly lines, and process production lines.

One of the company’s newest and most versatile products is the Universal Motion and Automation Controller (UMAC), a modular PMAC system built with a set of 3U-format Eurocards and a UBUS (Universal Bus) backplane that can be easily configured to meet an engineer’s performance needs.

Troubleshooting is a Snap

UMAC provides a rugged, integrated package that puts the Turbo PMAC2 or MACRO electronics, breakout connectors, amplifiers, and power supply in an enclosed 3U rack. Individual boards can slide in and out of the rack, communicating to the Turbo CPU or MACRO CPU board over the common UBUS backplane, making configuration and troubleshooting a snap.

The main component in a UMAC System is its CPU. The CPU of a UMAC Turbo System is the Turbo PMAC2 and for the UMAC MACRO it is the MACRO CPU board. If a MACRO CPU board is used, then the UMAC MACRO system is completed with a remotely connected PMAC2 Ultralite board or another UMAC Turbo system with the ACC-5E through either a fiber-optic or RJ45 twisted-pair cable. To create a complete UMAC system, boards with axis interface circuitry (PWM, 10V or stepper) and/or analog or digital I/O interface circuitry are added to the UBUS backplane.

If the PC/104 interface is used with the 3U-format Turbo PMAC2 CPU board, the PC/104 computer and its peripherals can fit inside the UMAC Turbo, yielding an incredibly powerful system in a compact industrial package. For example, a 21-slot (19-inch 3U Rack) UMAC with PC/104, 6 axes of PWM or analog servo control with 96 digital I/O points, analog inputs, power supply, and X4096 encoder interpolator for high-accuracy machining can rival the high-end NC controllers in the world at the fraction of the cost and packaging space.

ACC-UX: UBUS Back-plane

Delta Tau provides a set of backplane boards to connect the UMAC CPU boards to its servo and I/O interface boards, including third-party and custom-designed boards via the 96-pin DIN connectors on each board across an “open” shared bus called the UBUS.

A brief summary of available 3U size boards is:

- PC/104-Pentium computer with many options
- CPU’s - Turbo and MACRO, with high-speed Motorola 56303/309 DSP’s
- I/O Cards - Digital and analog input and output, high and low power, slow and fast
- Interpolators - X4096 for multiplying 1V/P/P Sinusoidal encoder inputs
- Encoder Input Boards - SSI, absolute, R/D, A/B quad, Sincos, etc.
- Axis Control Cards - Digital PWM, analog (10V, stepper (32 axes total, in any mix)
- Communication - USB, Ethernet...FireWire
- Field Buses - MACRO and with SST interface; DeviceNet, Profibus, Can Bus, etc.
- Third Party and Custom Designed - Temperature control/load cells/4 to 20 mA loops, etc.
- Power Supplies - +5 V and (15V)

The above variety of boards clearly demonstrates the tremendous versatility and adaptability of the UMAC system in diverse automation applications.

For More Information

Visit Delta Tau’s website at www.deltatau.com, call (818) 998-2095, fax (818) 998-7807, e-mail info@deltatau.com.

Power // Flexibility // Cost Effectiveness // Customer Service // Ease of Use