



PMAC2-PC/104 delivers cost effective motion control

Delta Tau's new controller exploits the power of DSP

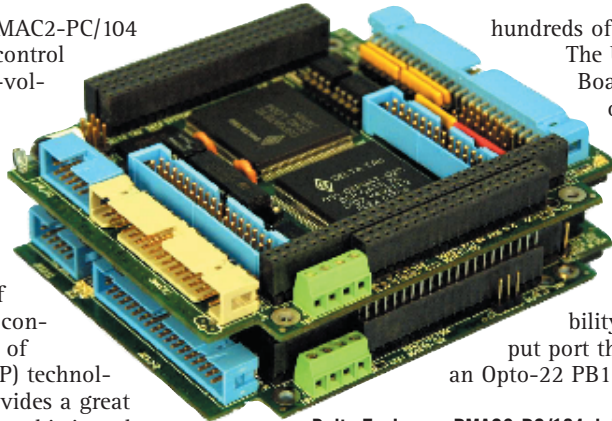
Delta Tau's new PMAC2-PC/104 delivers motion control for mid- to high-volume multi-axis motion control systems that demand a cost-effective and compact, yet flexible and reliable solution. A small-format version of the feature-rich PMAC family of controllers, the first motion controllers to exploit the power of Digital Signal Processor (DSP) technology, the PMAC2-PC/104 provides a great migration pathway to more sophisticated and powerful systems.

The PMAC2-PC/104 can be applied directly to both analog servos or pulse-and-direction stepper drives. With an optional piggyback board, it can also support the high-performance "direct-PWM" pure digital control. As a series of boards in the PC/104 form factor, this controller can be installed in a PC/104 stack, or act as a stand-alone controller with serial communications, including RS-232, USB, or Ethernet. Because the PMAC2-PC/104 uses standard PMAC2 firmware, it has all of the software capabilities of any PMAC2 controller.

The PMAC2-PC/104 uses a very high level of integration to achieve its small form factor. The main board has only three main components—the Motorola DSP CPU with embedded RAM, the servo ASIC, and flash memory backup—making it very simple and reliable, while maintaining its core capabilities. It supports four channels of servo/stepper interface, an RS-232 serial communications port, and an optional PC/104 bus communications port. Digital inputs and outputs that are not employed for their dedicated purpose can be used as general-purpose I/O, yielding up to 12 outputs and 24 inputs for each set of 4 channels.

The PMAC2-PC/104 Axis Expansion Board enables expansion to eight servo interface channels, with optional added digital I/O capability, including a link to

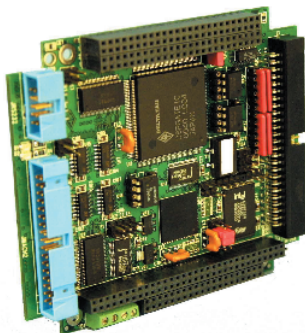
hundreds of external I/O points. The USB/Ethernet/Digital-I/O Board enables the use of one of two high-speed wire communications interfaces: USB or Ethernet. The interfaces can be used with or without dual-ported RAM. An option provides substantial digital I/O capability, with an 8-input/8-output port that directly connects to an Opto-22 PB16 or equivalent I/O driver



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board, a "Multiplexer" port that can interface to hundreds of I/O points on PMAC's ACC-34 family boards (or be used directly as 8 inputs and 8 outputs), and a "Handwheel" port with two supplemental machine channels, each of which can be used as a quadrature encoder input or a pulse-and-direction/single-phase PWM output for motion or process use. The addition of this board permits the PMAC2-PC/104 to be used as a full-fledged machine tool controller with Delta Tau's "PMAC-NC" software.

With more than 100,000 motion controller installations worldwide, Delta Tau motion controllers are hard at work improving quality, increasing productivity, and lowering costs per part. Delta Tau motion controllers can be found in every type of application, from grinding the corrective lenses for the Hubble Deep Space Telescope with the sub-nanometer resolution, to moving the 90% full scale replica of the Titanic for the blockbuster movie, to operating the world's fastest pick-and-place machines. In fact, Delta Tau products play an important role in virtually everyone's life every day.



This image shows a 4-axis PMAC2-PC/104 CPU card.

FOR MORE INFORMATION

Visit Delta Tau's website at www.deltatau.com, e-mail info@deltatau.com, call (818) 998-2095, fax (818) 998-7807, or circle the appropriate number on the Reader Service Card included in this supplement.

PMAC2-PC/104 circle 106