



## Advantage PC104

In this configuration the PMAC2A-PC/104 motion controller is stacked which a PC/104 type computer running the PMAC NC software. This combination yields a very compact and powerful system to control any CNC application. The PMAC NC software performs two important functions. It translates standard RS-274 G-Codes programs into PMAC code and also feeds the translated code into PMAC's memory using a perfectly synchronized communications scheme. The transfer of the program lines between the host computer and the PMAC motion controller is performed using shared DPRAM memory through the PC/104 bus. In this fashion, the size of the CNC parts program is limited only by the storage capacity in the host computer. The PMAC2A-PC/104 motion controller provides up to 8-axis of motion control with  $\pm 10V$  or pulse-and-direction command signals. In addition, this motion controller can optionally provide 64 digital general-purpose I/O, expandable to 1024, and 4  $\pm 10V$  analog inputs.

It is the ideal Low Cost, High Performance “**Do it yourself**” System.

### Features

- Powerful and economical way to build your own Dual Processor CNC Control
- Extremely small footprint, PC/104 Connector Format
- 8-Axis Coordinated Motion
- 2048 I/O Points
- Large selection of I/O options



PMAC2A-PC/104

### Connectivity

- Part Program Size only limited by hard disk space due to PC-Base architecture and NC control rotary buffer
- Communicate via PC104/ISA Bus, USB, or Ethernet

### Hardware

- 4-Axis, Expandable to 8 Axes
- Modular I/O Expandability to 2,048 Points
- 55 $\mu$ s Default Servo Update

### Software

- Operates on Windows 98, XP, 2000, NT
- RS-274 Lathe and Mill Software Available
- Easy to create custom OEM Software
- 5-Axis Interpolation
- Open Architecture PLC
- Linear, Circular, and Helical Interpolation
- Advanced Segmented Block Lookahead

| 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 NC2.36

# Embedded NC

## 4-axis NC Controller

**Full PMAC-NC gives you everything you need to control a Machine Tool**



NC Operator Control Panel



**PMAC NC2.36**

G-code programming Environment



Connects to JTHW Port

- **Very Low Cost, Open-Architecture CNC Controller**
- **Pre-defined and User definable G,M,T-Codes**
- **Lead Screw and Backlash Compensation tables**
- **Linear and Circular Interpolation**
- **Standard cycles for drilling, tapping, rigid tapping, boring etc.**
- **Tool radius / length / wear Compensation**
- **User Programmable Error Trapping and Display**
- **Multi-block Lookahead Optional**
- **Diagnostic Capability**



**PMAC PC/104** can connect to any Computer with a PC/104 Bus