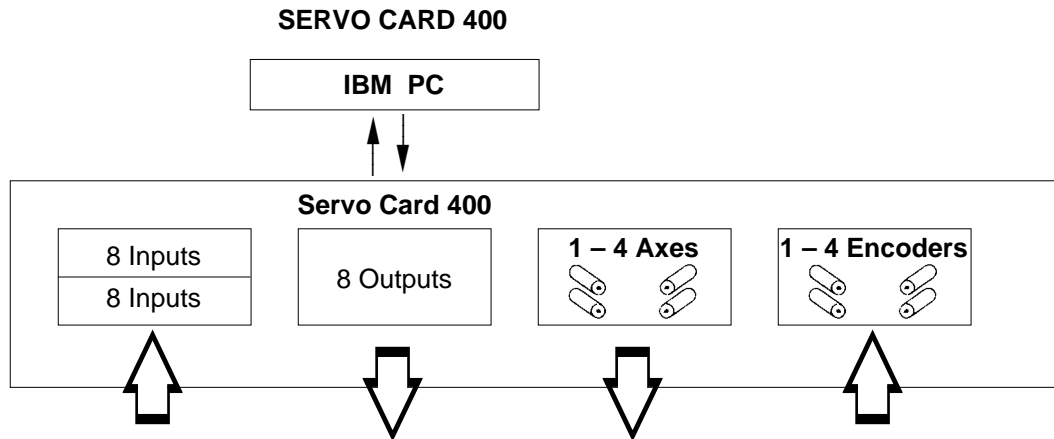
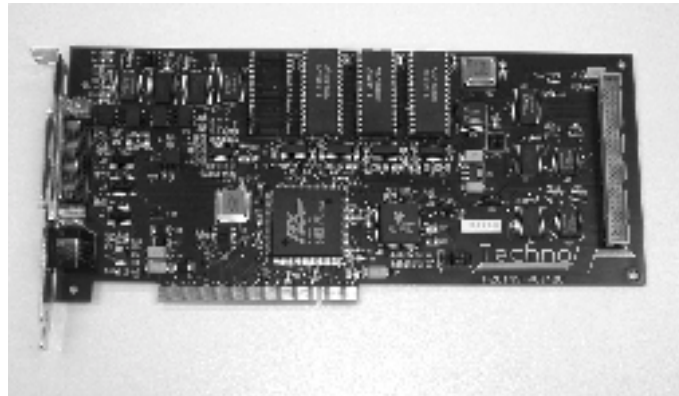


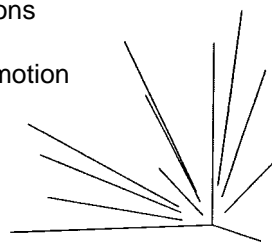
The PCI Servo Card is a Servo Motor Control Board and Logic Control System designed to be inserted into one PCI slot in an IBM PC or compatible computer. The PCI Servo Card is designed for continuous heavy-duty applications.



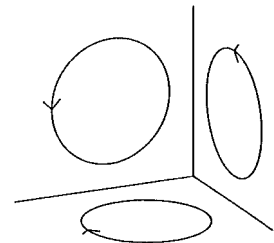
- ◆ 1 – 4 axes of servo motor control with analog ( $\pm 10V$ ) output
- ◆ Up to 4 cards per PC can be used
- ◆ A jog program (SAC) is provided along with a simple English-like programming system that allows both motion and I/O to be programmed. The jog program can also be used to teach position.
- ◆ Home/Overtravel for each axis
- ◆ Bidirectional communications
- ◆ Plugged in and directly controlled by PC
- ◆ High speed TTL or Line Driver optical encoder input for each axis
- ◆ Real-time reporting of position and velocity
- ◆ 16 inputs and 8 outputs

**MOTION CAPABILITIES**

- Linear interpolation - the coordinated multi-axis linear motions between any 4 axes at any velocity or acceleration
- Circular interpolation - true coordinated multi-axis circular motion between any 2 axes at any velocity and acceleration
- Capable of constant velocity paths
- Change velocity and position targets on the fly
- Incremental and absolute commands
- Programmable position breakpoints
- Programmable 32-bit position, velocity, and acceleration
- Axes can be programmed independent or interpolated



Linear Interpolation



Circular Interpolation

INPUTS / OUTPUTS

- ◆ 16 inputs in 2 groups of 8 – each group of 8 can be independently operated at 5V, 12V, or any user-selected voltage up to 24V.
- ◆ 8 outputs in 1 group of 8 – this group of 8 can be operated at 5V, 12V, or any user-selected voltage up to 24V, 400 mA maximum.

EASY SOFTWARE DEVELOPMENT

SAC software, provided with the PCI Servo Card, is an easy to use automation program. This program allows all the motion and I/O functions of the PCI Servo Card to be utilized. It includes:

- A full screen text editor
- Integrated compiler with easy to use debugging features
- Integrated communications routine to test programs

SAC COMMAND SUMMARY

Code	Function
ACCEL	Sets the rate of acceleration
ARC	Circular interpolation
ARC3PT	Circular interpolation by 3 points
ARCPOL	Circular interpolation in polar format
ASK	Asks a question
BEEP	Makes a beeping noise
CALL	Calls a subroutine
CLRPOS	Sets a new software home
DEFINE	Assigns a macro to substitute for any text in the program
DELAY	Pauses the program
DO	Repeats the code inside the curly braces
END	Ends the program and displays a message
GOTO	Jumps the program to the location of the label
HOME	Homes an axis at the specified speed.
IF	The program jumps to a label location
MOVE	Moves the axes to a location
MOVETO	Moves the axes to the designated absolute position
OUT	Turns the specified output on or off
PAUSE	Pauses the program
RETURN	Return from subroutine
SPEED	Sets the rate of movement of the axes
SPINDLE	Turns the spindle or device output on or off
TANARC	Circular interpolation tangent to arc
WAIT FOR	Pauses the program until an input
WHILE	Executes the code specified in the designated mode

Catalog Number	Item	Page
H20T43-PCI402	Servo Controller Card – 2 axes	158
H20T43-PCI403	Servo Controller Card – 3 axes	158
H20T43-PCI404	Servo Controller Card – 4 axes	158
H26T56-SRVBOX2	Servo Power Box, 500VA*	156
H26T56-SRVBOX1H	Servo Power Box, 1000VA**	156
H20C17-4122P-01	Servo Amplifier, 12A peak / 6A cont.	157
H20C17-4122P-02	Servo Amplifier, 25A peak / 10A cont.	157
HX1700M1015	Motor / Encoder Cable, 10ft	166
HX1700M1025	Motor / Encoder Cable, 25ft	166

\* Powers up to 4 – 4122P-01 Amps or 2–4122P-02 Amps

\*\* Powers up to 4 – 4122P-02 Amps

**A complete Servo Motion Control System consists of the following:**

- PCI Servo Controller Card (page 158)
- SAC software (included with PCI Servo Card) or other programming language (page 171)
- Servo Power Box (page 156)
- Servo Motor Amplifiers, one per axis (page 157)
- Servo Motor / Encoder cables, one per axis (page 166)
- IBM Compatible PC (Pentium 100 Minimum)

