PCI Motion Control

PISO-PS400/S

High Speed 4-Axis Motion Control Card, Include PISO-PS400+DN-8468+CA-SCSI15

DN-8468

CA-SCSI15   **PISO-PS400**
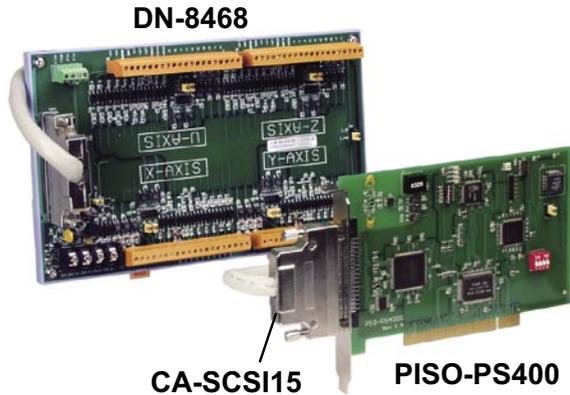
Features

- Independent 4-axis motion control
- 2/3-axis linear interpolation function
- 2-axis circular interpolation function
- Continuous interpolation function
- Programmable T/S-curve acceleration and deceleration
- A maximum of 4M pps pulse output rate for each axis
- Pulse output types: CW/CCW or Pulse/Direction home direction
- 32-bit encoder counter for each axis
- Encoder pulse input types: A/B phase or Up/Down
- Programmable automatic homing for each axis
- Position comparison management and software limits
- Many synchronous actions
- Support for hand-wheel and jog functions
- Expandable remote I/O: 128 DI and 128 DO via two-wired FRnet interface

Functional Description

The PISO-PS400 is a 4-axis stepping/pulse-type servo motor control card that can be used on any IPC with 5V PCI bus, and is suitable for general-purpose motion applications. This card also contains one port of FRnet which allows IPC to expand its fast remote I/O easily. This two-wired FRnet can have maximum 128 DI and 128 DO, and they are automatically scanned with a period of 2.88 ms.

PISO-PS400 contains a high-performance motion ASIC. Apart from its wide speed range capability, this intelligent motion controller also has a built in variety of motion control functions, such as 2/3- axis linear interpolation, 2-axis circular interpolation, T-profile/S-curve acceleration/deceleration, various synchronous actions, automatic homing, and others. In addition, most of the PISO-PS400 motion control functions are performed with little load on the processor. The motion status, FRnet I/O, and the other I/O cards on IPC can still be monitored while driving. As a result of the low CPU loading requirements of the PISO-PS400, one or more motion cards can be used on a single IPC. ICPDAS has also provided a variety of functions and examples to reduce the loading of programming for users, making it a highly cost-effective solution for machine makers.

Applications

- Electric assembly
- Semiconductor, LCD manufacturing and measurement
- Fix-Pitch Stamping Machine
- Transfer Machine
- Spinner
- Loader/Unloader
- Robotic
- CNC machine

Software Support

Windows Platform

Driver supports for Windows XP/2K/98.
Programming Tool: VB/VC++/BCB/Delphi

Specifications

Motion

- Number of axis: 4
- Max. number of cards in system: 16
- Max. output pulse: 4M PPS
- Programmable pulse output mode: OUT/DIR、CW/CCW
- 32 bit UP/Down counter for reading encoder
- Position range: -2,147,483,648 ~ +2,147,483,647

Motion Interface I/O signals

- Isolation of I/O signal: 2500Vrms
- Incremental encoder input: A/B-phase, Up/Down
- Encoder index input: Z-phase
- Mechanical I/O input: ±EL(Limit switch), ORG(Home), NORG(Near Home)
- Servomotor I/O: INP(Input), ALM(Input), Servo-ON(output)
- General I/O input: IN3
- External EMG input: ENG_IN
- Pulsar input: EXP±
- Input Signal Integral Type Filter: Filter Time Constant: 2 ~ 16ms, 8 stages

FRnet

- Max. Expanded 128DI and 128DO
- Hardware auto-scan I/O for every 2.88 ms
- Two-wired serial bus is very wire-saving
- Max. communication distance: 400 M

General Specifications

- Power requirements: Ext. Power 24V DC
- Operating temperature: -20 ~ +75°C
- Operating humidity: 10 ~ 85%RH, non-condensing
- Storage temperature: -30 ~ +85°C
- Storage humidity: 5 ~ 90%RH, non-condensing
- Dimensions: 157.1 mm x 105.7 mm