PISO-PS400

PCI Bus, High-speed
4-axis Motion Control Card
with FRnet Master

Introduction

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

In addition to its wide speed range, this intelligent motion controller also has a variety of motion control functions built in, such as 2/3-axis linear interpolation, 2-axis circular interpolation, T/S-curve acceleration/deceleration, numerous synchronous actions, automatic homing, and others. A major advantage is that the majority of the PISO-PS400 motion control functions are performed by the high-performance motion ASIC with little load on the processor. The motion status, FRnet I/O, and the other I/O cards on the IPC can still be monitored while driving the motors.

As the low CPU loading requirements of the PISO-PS400 is minimal, one or more motion cards can be used with a single IPC. ICP DAS also provides a variety of functions and examples that can be used to reduce the need for additional programming, making it a highly cost-effective solution for motion control application developers.

Features

- Independent 4-axis motion control
- Support for hand wheel and jog functions
- 2/3-axis linear / 2-axis circular interpolation function
- Continuous interpolation function
- Programmable T/S-curve acceleration and deceleration
- A maximum pulse output rate of 4 MHz for each axis
- Pulse output types: CW/CCW or PULSE/DIR
- 32-bit encoder counter for each axis
- Encoder pulse input types: A/B phase or Up/Down
- Programmable automatic homing for each axis
- Programmable software limits
- A wide range of synchronous actions (event-triggered actions)
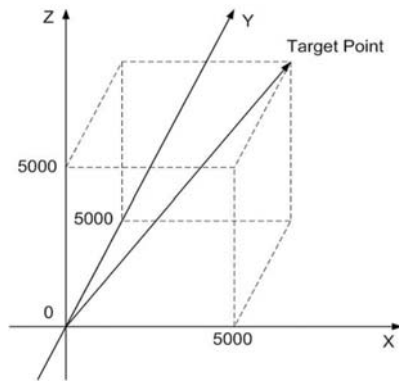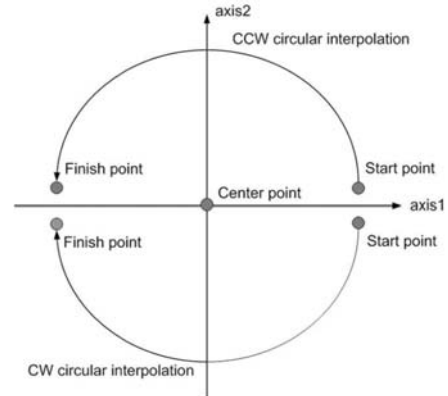- Expandable Remote I/O: 128 DI & 128 DO via a two-wire FRnet interface

Software Support

Windows Driver/DLL/Lib	Windows 7/10 32/64-bit Windows XP/2000 32-bit
DOS Library	-
Labview Development Kit	Labview 5.0 ~ Labview 8.x
Linux Library	-

Specifications

Model	PISO-PS400
General	
Number of Axes	4
Slot Interface	5 V PCI bus
Pulse Output Rate	4 MHz (Max.)
Command Type	Pulse Command
Resolution	32-bit
Pulse Output Mode	CW/CCW, PULSE/DIR
Operation Mode	Semi-closed Loop
Linear Interpolation	Any 2 to 3 of 4 axes
Circular Interpolation	Any 2 axes
Speed Curve Profile	T/S-curve
Synchronous Action	10 activation factors and 14 actions
Ring Counter Mode	32-bit
Position Control Mode	Incremental mode and Absolute mode
Position Compare Trigger	10 KHz
Encoder Interface	A/B pulse, Up/Down
Encoder Counter	32-bit

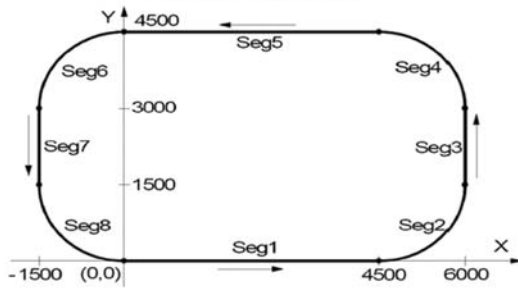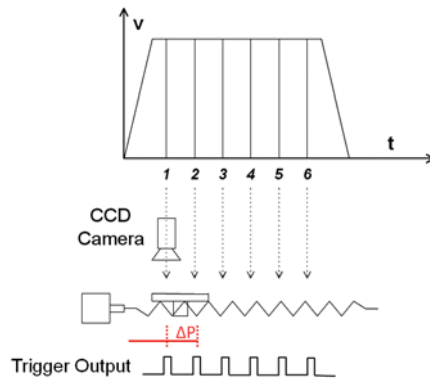| Model	PISO-PS400
Encoder Counting Rate	4 MHz (Max.)
I/O Isolation (with DN-8468)	2500 Vrms optical isolation
Connector	68-pin SCSI-II connector
Motion Relative I/O	
Mechanical Switch Input	Home, LMT+/-, NHOME, EMG
Servo I/O Interface	Input: INP, ALM; Output: SVON
Digital Input	
Digital Input Channels	Expandable: 128 DI
Digital Output	
Digital Output Channels	Expandable: 128 DO
Power	
Power Consumptio	+5 V @ 500 mA
Environmental	
Operating Temperature	-20 ~ +75°C
Storage Temperature	-30 ~ +85°C
Ambient Relative Humidity	5 ~ 90% RH, non-condensing

■ Features of Motion Function

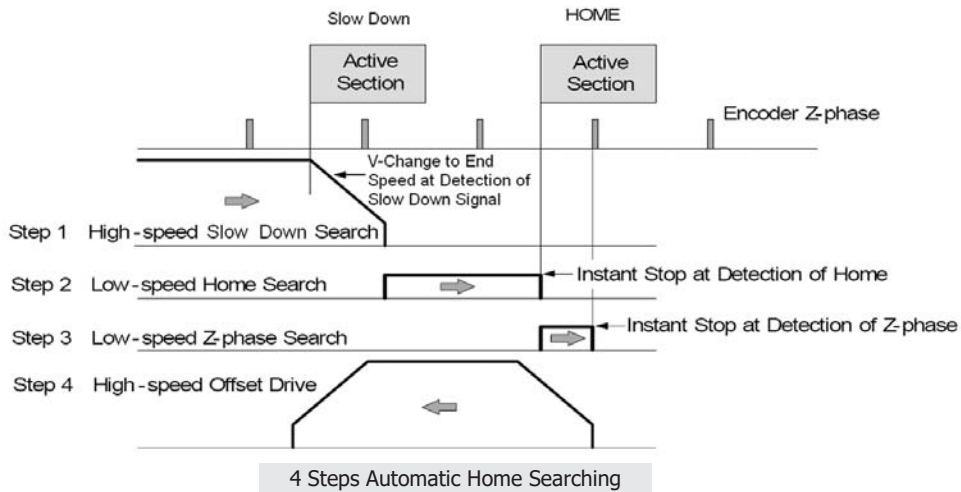2 or 3-Axis Linear Interpolation

2-Axis Circular Interpolation

Continuous interpolation

High Speed Position Compare

4 Steps Automatic Home Searching

■ Ordering Information

PISO-PS400	PCI Bus, High-speed 4-axis Motion Control Card with FRnet Master

■ Accessories

DN-8468UB	Photo-isolated Universal Snap-on Wiring Terminal Board
DN-8468GB	Photo-isolated General Purpose Wiring Terminal Board
DN-8468MB	Photo-isolated Snap-on Wiring Terminal Board for Mitsubishi MELSERVO-J2 Servo Amplifier
DN-8468PB	Photo-isolated Snap-on Wiring Terminal Board for Panasonic MINAS A4/A5 Servo Amplifier
DN-8468YB	Photo-isolated Snap-on Wiring Terminal Board for Yaskawa Sigma II/III/V Servo Amplifier
DN-8468DB	Photo-isolated Snap-on Wiring Terminal Board for Delta ASDA-A Servo Amplifier
DN-8468FB	Photo-isolated Snap-on Wiring Terminal Board for Fuji FALDIC-W Servo Amplifier
CA-SCSI15-H2 CA-SCSI30-H2 CA-SCSI50-H2	68-pin SCSI-II Male-Male Connector Cable, Length 1.5 M / 3 M / 5 M.