



## PCIe-PS400

PCI Express Bus,  
High-speed 4-axis  
Motion Control Card



## PISO-PS400

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



## PISO-PS400U



### 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: (For PISO-PS400, PISO-PS400U) 128 DI & 128 DO via a two-wire FRnet interface



### Introduction

The **PISO-PS400(U)** and **PCIe-PS400** are 4-axis stepping/pulse-type servo motor control card that can be used on any IPC with PCI or PCI Express bus, and is suitable for general-purpose motion control applications. **PISO-PS400(U)** 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.

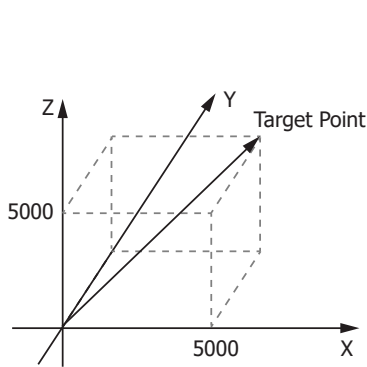
In addition to its wide speed range, this intelligent motion controller also has a variety of motion control functions built in, such as 2/3-axis linear interpolation, 2-axis circular interpolation, T/S-curve acceleration/deceleration, numerous synchronous actions, automatic homing, and others. A major advantage is that the majority of the PS400 series 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 PS400 series 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.

### Specifications

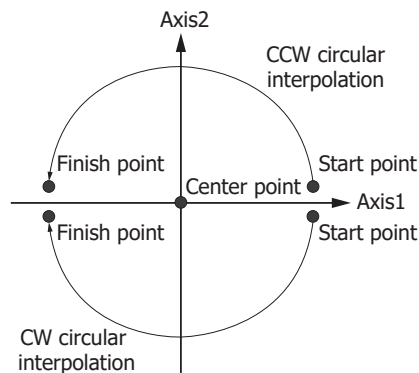
Model	PCIe-PS400	PISO-PS400	PISO-PS400U
<b>Software</b>			
OS Support	Windows 7/10 32/64-bit Windows XP/2000 32-bit		
Utility	EzGo Utility		
SDK	Labview 5.0 ~ Labview 8.x		
<b>Hardware</b>			
Connector	68-pin SCSI-II connector		
<b>General</b>			
No. of Axes	4		
Operation Mode	Semi-closed Loop		
Synchronous Action	10 activation factors and 14 actions		
Speed Profile	T/S-curve		
Position Control Mode	Incremental mode and Absolute mode		
Command Type	Pulse Command		
Isolation (with DN-8468)	2500 Vrms optical isolation		
<b>Axis I/O</b>			
Servo Interface Output	SVON		
Mechanical Switch Input	Home · LMT+/- · NHOME · EMG		
Position Compare Output	10 KHz (X and Y only)		
Servo Interface Input	INP, ALM		
<b>Encoder Input</b>			
Ring Counter Mode	32-bit		
Mode	A/B Phase, Up/Down		
Counting Rate	4 MHz (Max.)		

Model	PCIe-PS400	PISO-PS400	PISO-PS400U
Counter Width	32-bit		
<b>Pulse Output</b>			
Mode	CW/CCW, PULSE/DIR		
Counter Width	32-bit		
Rate	4 MHz (Max.)		
<b>Interpolation</b>			
Circular	Any 2 axes		
Linear	Any 2 to 3 of 4 axes		
<b>Digital Input</b>			
Channels	Local: 4 DI	Local: 4 DI, Expandable: 128 DI	
<b>Digital Output</b>			
Channels	-	Expandable: 128 DO	
<b>PC Bus</b>			
Type	PCI Express x1	5 V PCI bus	3.3 V/5 V Universal PCI
<b>Power</b>			
Consumption	+12 V @ 200 mA +3.3 V @ 500 mA	+5 V @ 500 mA	
<b>Environment</b>			
Operating Temperature	-20 ~ +75°C		
Storage Temperature	-30 ~ +85°C		
Humidity	5 ~ 85% RH, Non-condensing		

## Features of Motion Function

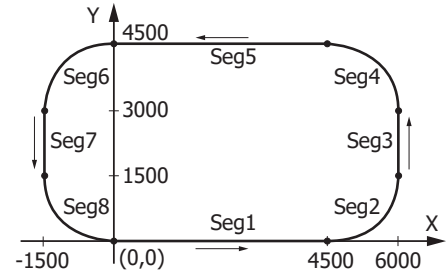


2 or 3-Axis Linear Interpolation

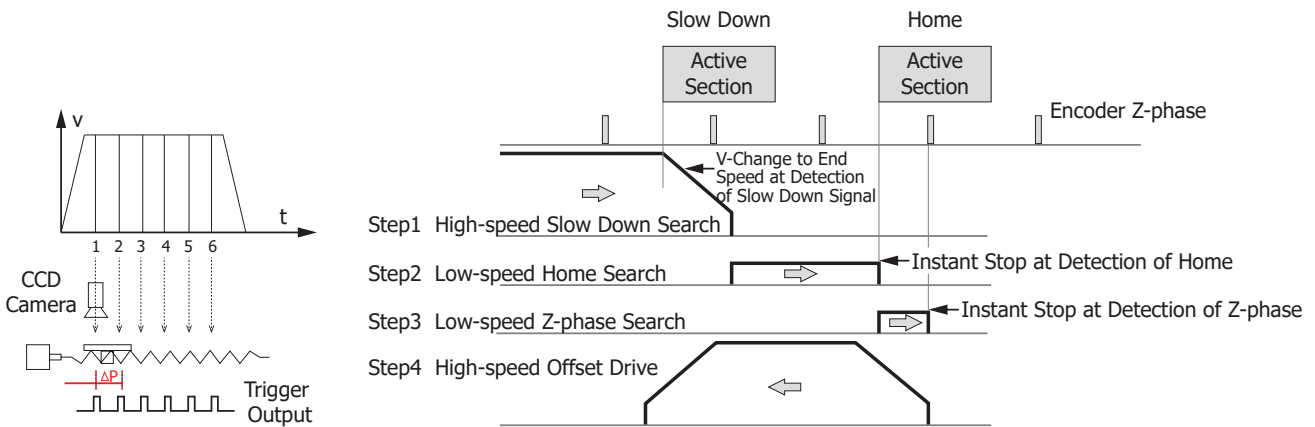


2-Axis Circular Interpolation

8 Segments Continuous Interpolation Motion (Linear + Circular)



Continuous Interpolation



High Speed Position Compare

4 Steps Automatic Home Searching

## Ordering Information

<b>PCIe-PS400 CR</b>	PCI Express Bus, High-speed 4-axis Motion Control Card (RoHS)
<b>PISO-PS400</b>	PCI Bus, High-speed 4-axis Motion Control Card with FRnet Master
<b>PISO-PS400U</b>	Universal 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-H3 CA-SCSI30-H3 CA-SCSI50-H2	68-pin SCSI-II Male-Male Connector Cable, Length 1.5 M / 3.0 M / 5.0 M