

PCIe-PS400

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



PISO-PS400 PISO-PS400U

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

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.

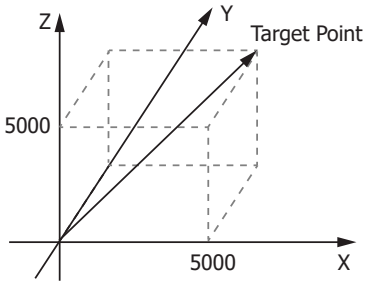
Specifications

Model	PCIe-PS400	PISO-PS400	PISO-PS400U
Software			
OS Support	Windows 7/10 32/64-bit Windows XP/2000 32-bit		
Utility	EzGo Utility		
SDK	Labview 5.0 ~ Labview 8.x		
Hardware			
Connector	68-pin SCSI-II connector		
General			
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		
Axis I/O			
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		
Encoder Input			
Ring Counter Mode	32-bit		
Mode	A/B Phase, Up/Down		
Counting Rate	4 MHz (Max.)		

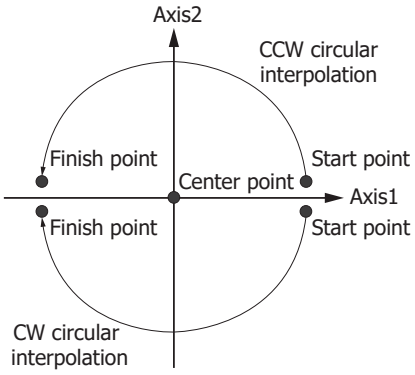
Model	PCIe-PS400	PISO-PS400	PISO-PS400U
Counter Width	32-bit		
Pulse Output			
Mode	CW/CCW, PULSE/DIR		
Counter Width	32-bit		
Rate	4 MHz (Max.)		
Interpolation			
Cicular	Any 2 axes		
Linear	Any 2 to 3 of 4 axes		
Digital Input			
Channels	Local: 4 DI	Local: 4 DI, Expandable: 128 DI	
Digital Output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

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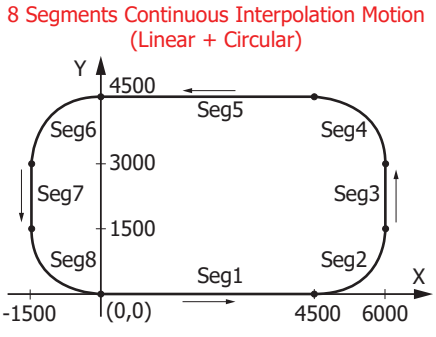
Features of Motion Function



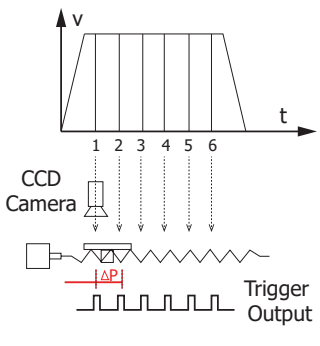
2 or 3-Axis Linear Interpolation



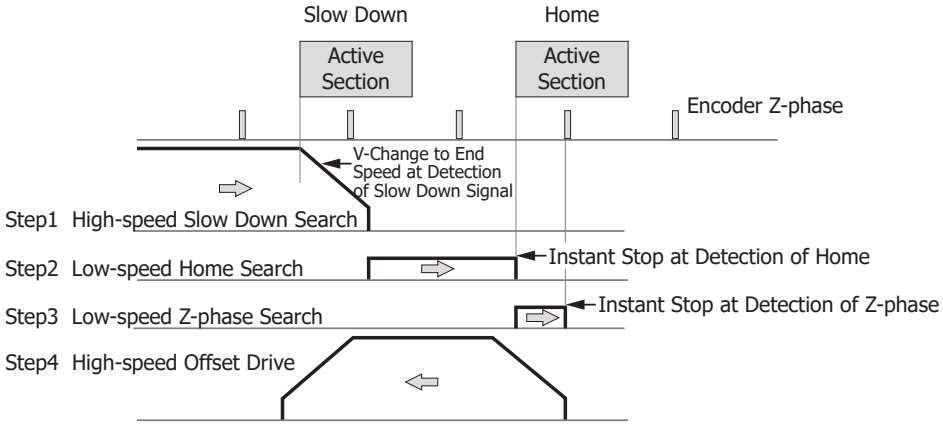
2-Axis Circular Interpolation



Continuous Interpolation



High Speed Position Compare



4 Steps Automatic Home Searching

Ordering Information

PCIe-PS400 CR	PCI Express Bus, High-speed 4-axis Motion Control Card (RoHS)
PISO-PS400	PCI Bus, High-speed 4-axis Motion Control Card with FRnet Master
PISO-PS400U	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

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