ICP DAS

PISO-PS400 **PISO-PS400U**

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

PCIe-PS400

PCIe-PS400:PCI Express Bus,High-speed 4-axis Motion Control Card

⊞ 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

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▣ 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. These 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 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	PISO-PS400	PISO-PS400U	PCIe-PS400
General			
Number of Axes	4		
Slot Interface	5 V PCI bus	3.3 V/5 V Universal PCI	PCI Express x1
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 (X and Y only)		
Encoder Interface	A/B pulse, Up/Down		
Encoder Counter	32-bit		
Encoder Counting Rate	4 MHz (Max.)		
I/O Isolation (with DN-8468)	2500 Vrms optical isolation		
Connector	68-pin SCSI-II connector		

Model	PISO-PS400	PISO-PS400U	PCIe-PS400
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	Local: 4 DI Expandable: 128 DI		Local: 4 DI
Digital Output			
Digital Output Channels	Local: 4 DO Expandable: 128 DO		-
Power			
Power Consumption	+5 V @ 500 mA		
Environmental			
Operating Temperature	-20 ~ +75°C		
Storage Temperature	-30 ~ +85°C		
Ambient Relative Humidity	5 ~ 90% RH, non-condensing		

▣ 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	-

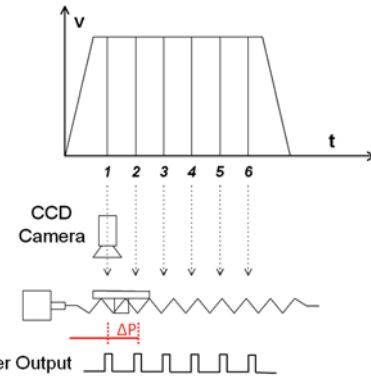# ■ Features of Motion Function
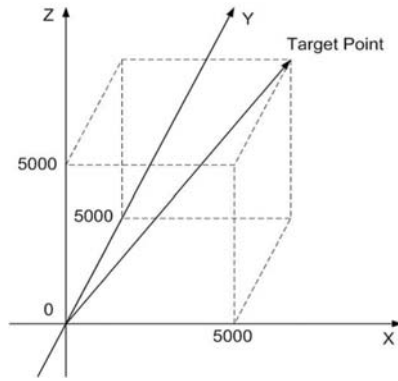
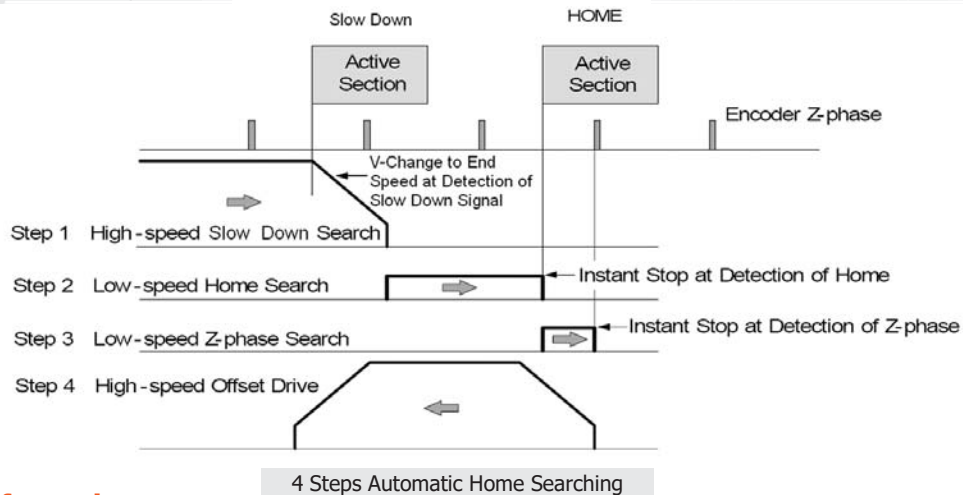2 or 3-Axis Linear Interpolation
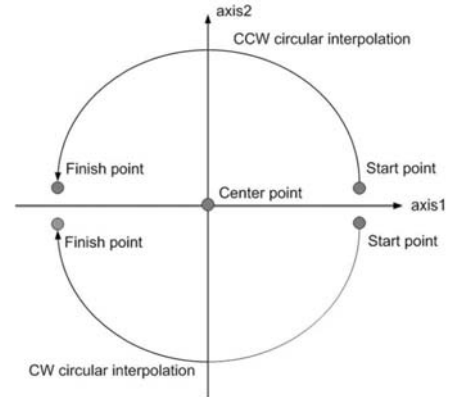
2-Axis Circular Interpolation
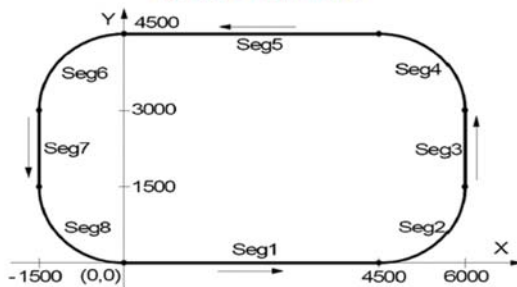
Continuous interpolation

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

■ 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 M / 5 M.