

PISO-PS810

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

Features

- Independent 8-axis motion control
- Support for hand wheel and jog functions
- 4-step home modes with auto-searching
- 2/3-axis linear interpolation function
- 2-axis circular interpolation function
- Programmable T/S-curve acceleration and deceleration
- Programmable ring counter
- Alarm reset and error counter clear output (ERC)
- High-speed auto-incremental and auto-reloadable compare output (CMP)
- Expandable remote I/O:
  128 DI and 128 DO via a two-wire FRnet interface

Introduction

The PISO-PS810 is a 8-axis stepping/pulse-type servo motor control card that can be used on any IPC with a 5 V or 3.3 V PCI bus, and is suitable for general-purpose motion 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 0.72 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-PS810 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-PS810 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.

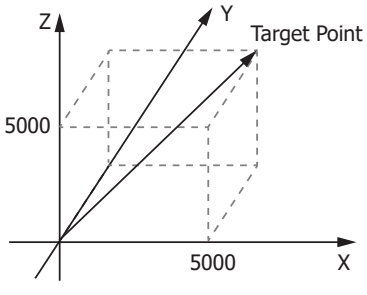
Specifications

Model	PISO-PS810
Software	
OS Support	Windows 7 32/64-bit Windows XP/2000 32-bit
Utility	EzGo Utility
Hardware	
Connector	100-pin SCSI-II
General	
No. of Axes	8
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
Axis I/O	
Servo Interface Output	SVON, ALM_RST, ERC
Mechanical Switch Input	Home, LMT+/-, NHOME, EMG
Position Compare Output	High-Speed 5 V TTL or 24 V open collector (4 of any 8 axes)
Servo Interface Input	INP, ALM
Encoder Input	
Ring Counter Mode	32-bit
Mode	A/B Phase, Up/Down
Counting Rate	4 MHz (Max.)
Counter Width	32-bit

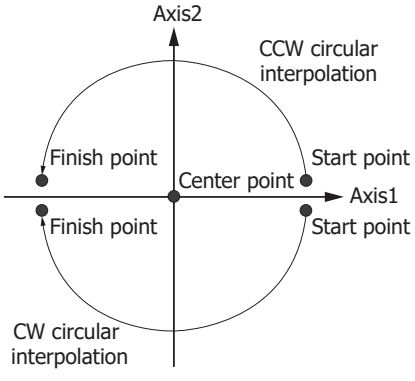
Model	PISO-PS810
Pulse Output	
Mode	CW/CCW, PULSE/DIR
Counter Width	32-bit
Rate	4 MHz (Max.)
Interpolation	
Cicular	2 groups of 2 axes Interpolation
Linear	2 groups of 2 to 3 axes Interpolation
Digital Input	
Channels	Local: 8 DI Expandable: 128 DI
Isolation	2500 Vrms optical isolation
Digital Output	
Channels	Local: 8 DO Expandable: 128 DO
Isolation	2500 Vrms optical isolation
PC Bus	
Type	Universal PCI Bus
Power	
Consumption	+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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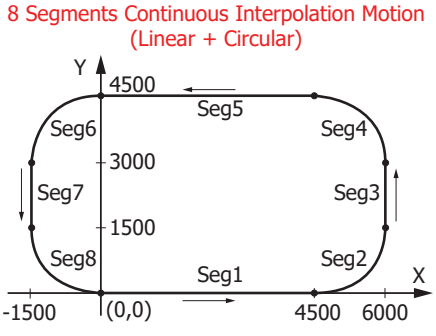
Features of Motion Function



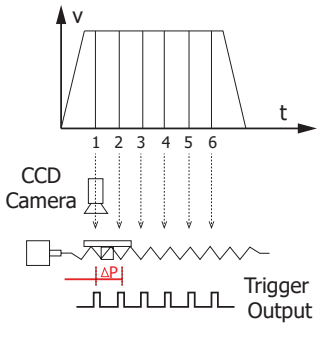
2 or 3-Axis Linear Interpolation



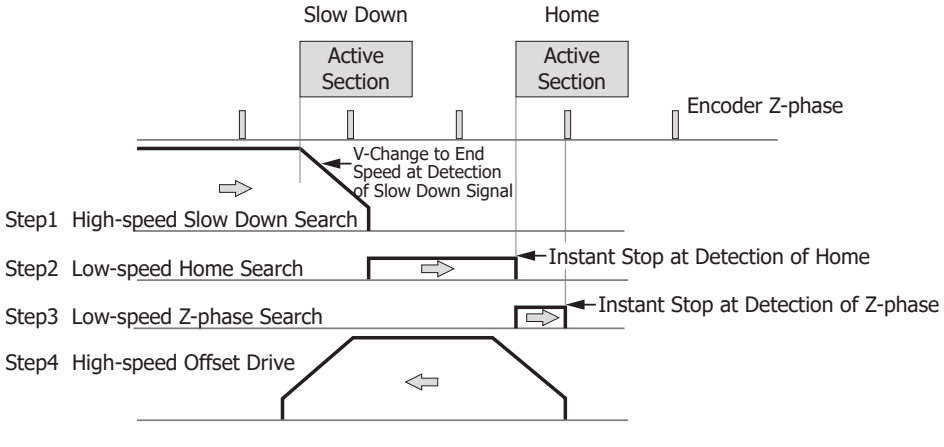
2-Axis Circular Interpolation



Continuous Interpolation



High Speed Position Compare



4 Steps Automatic Home Searching

Ordering Information

PISO-PS810	Universal PCI Bus, High-speed 8-axis Motion Control Card with FRnet Master

Accessories

DN-84100U	Universal Snap-on Wiring Terminal Board for PISO-PS410 and PISO-PS810
CA-SCSI100-15	SCSI-II 100-pin & 100-pin Male Connector Cable, Length 1.5 M

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