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 Mpps 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
- Position comparison management and software limits
- A wide range of synchronous actions (event-triggered actions)
- Can operate as a standalone module or in conjunction with a PAC

I-8094A-G
High-speed 4-axis Motion Control Module with Internal CPU

Introduction

The **I-8094A** is a 4-axis stepping/pulse-type servo motor control module that can be used on any of the ICP DAS PAC series controllers, and is suitable for general-purpose motion applications. The I-8094A has the full functions of the I-8094 and has an internal 80186 CPU allowing the module to be used to perform additional functions, including the ability to perform motion operations without requiring a PAC. When working with a PAC, it also allows users to perform additional functions by calling user-defined subroutines (Macro functions). Users can embed their customized processes (know-how) inside this module.

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 I-8094A motion control functions are performed by the high-performance motion ASIC with little load on the processor. While driving the motors, the motion status, and the status of the other I/O channels on the PAC modules, can still be monitored.
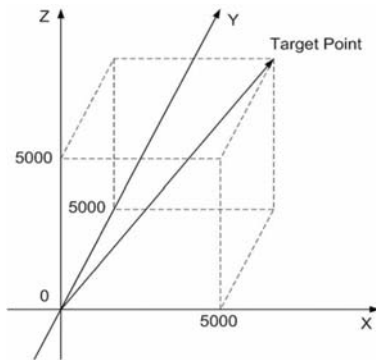
As the CPU loading requirements of the I-8094A is minimal, one or more motion modules may be used with a single PAC controller. ICP DAS also provides a variety of functions, and examples that can be used to reduce the need for additional programming by users, making it a highly cost-effective solution for motion control application developers.
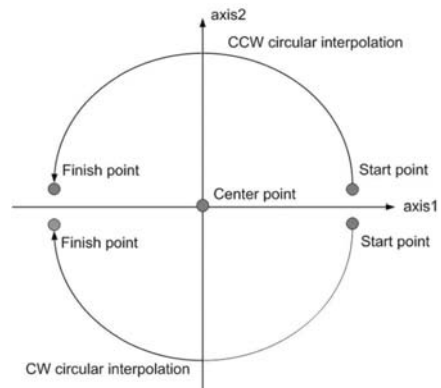
Specifications

Model	I-8094A-G
General	
Number of Axes	4
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
Motion Relative I/O	Home, LMT+/-, NHOME, EMG, INP, ALM, SVON
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

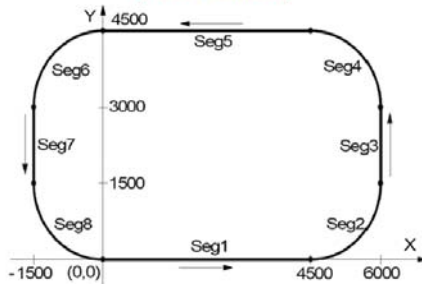| Model	I-8094A-G
Encoder Counting Rate	4 MHz (Max.)
Digital Input Channels	-
Digital Output Channels	-
I/O Isolation(with DN-8468)	2500 Vrms optical isolation
Connector	68-pin SCSI-II connector
Power Consumption	+5 V @ 500 mA
Macro Functions	•User-defined subroutines •The contents of subroutines can be different depending on the users custom designs •Functions can be loaded as a macro on-line •Macro can be run as default function calls •User's know-how can be maintained in privacy
Environmental	
Operating Temperature	-20 ~ +75°C
Storage Temperature	-30 ~ +85°C
AmbientRelativeHumidity	5 ~ 90% RH, non-condensing

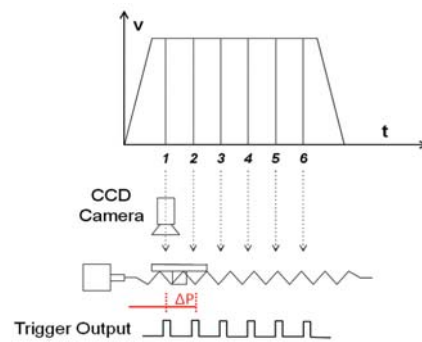## ■ Features of Motion Function

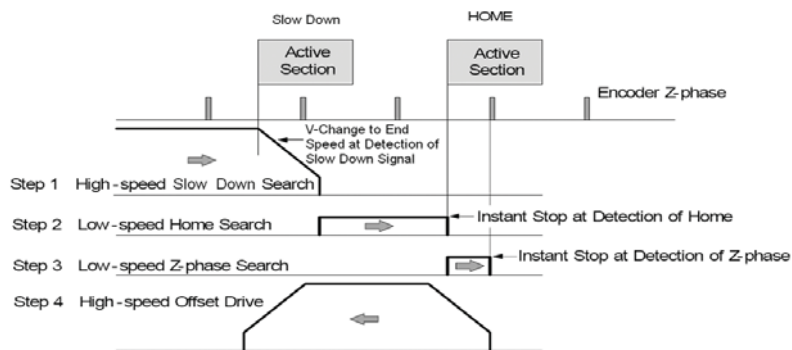2 or 3-Axis Linear Interpolation

2-Axis Circular Interpolation

Continuous interpolation

High Speed Position Compare

4 Steps Automatic Home Searching

■ Ordering Information

I-8094A-G	High-speed 4-axis Motion Control Module with Internal CPU

■ 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 / 3.0 M / 5.0 M