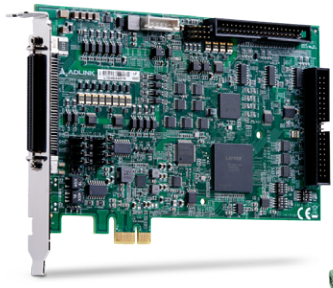
AMP-304C

4-Axis Pulse Motion Controller

Advanced motion control for servo / stepper motor

General Features

- PCI Express® Gen1 x1
- Pulse Output Frequency up to 9.99 Mpps
- Encoder Feedback Input Frequency up to 16 MHz
- Mechanical Signal Input / Servo Interface IO
- 32-ch Onboard Isolated GPIO / 32-ch Extended TTL GPIO
- 12-ch Position Latch Input
- 16-ch Position Comparison Trigger Output
- 4-ch Dedicated CMP Output with Voltage Selection
- Selection of EL Logic NO/NC Mode by Switch
- Selection of DO Initial State by Switch
- Programmable Interrupt Control
- Security Protection for User's Program
- DIN-304C to Support Specific Motors by Cable Selection



AMP-304C



DIN-304C

Motion Features

- T-Curve and S-Curve: Asymmetric Profile is Configurable
- 13 Home Return Modes
- Speed and Position Change On-The-Fly
- Linear / Circular / Helical Interpolation
- Selection of Motion Stop Method: EMG / Deceleration Stop
- Backlash Compensator / Vibration Suppression
- High Speed Position Latch Function with Configurable Filter
- Flexible Position Comparison Trigger Output Function

Software Support

- **OS Information**

  Windows 7/10 (x86/x64)
- **Software Compatibility**

  • APS Function Library Support

  • Visual Studio VB.NET, C#, VC.NET Compatible
- **Software Recommendations**

  MotionCreatorPro2™ (MCP2)

Introduction

AMP-304C is an advanced 4-axis motion controller card with a PCI Express® interface that can generate a pulse train up to 9.99MHz to control a motor. With more general purpose as well as dedicated IOs, functional logic selection switches, 4-channel encoder feedback input, AMP-304C can be used for a multitude of scenarios or applications.

As a motion controller, AMP-304C covers all functions of the AMP-104C, which provides asymmetric speed profile settings in T-curve and S-curve, selection of motion stop method, and changing speed on the fly. Also supported are interpolation in linear, circular and helical directions with any 2-4 axes, 13 home return modes, backlash compensator, and vibration suppression.

Highly flexible position comparison trigger, and position latch functions are provided. The trigger function can be implemented by 16-channel output, including 4-channel dedicated output with voltage selection by onboard jumpers, while the position latch function uses a 12-channel input.

Ordering information

Terminal Board

- **DIN-304C**

  Exclusive Terminal Board for AMP-304C
- **DIN-68S-01**

  Terminal board with 68-pin SCSI-II connector
- **DIN-37D-01**

  Terminal board with 37-pin D-SUB connector

Cable

- **ACL-10569-X**

  68-pin SCSI-II Cable, X = 1, 2, 3 (M)
- **ACL-10137-X**

  37-pin D-SUB Cable, X = 1, 2, 3, 5 (M)
- **ACL-10437**

  40-pin Box Header to 37-pin DSUB with Bracket

LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

Specifications

Model Name	AMP-304C
Pulse Type Motion Control	
Max. Axes	4
Pulse Output Frequency	up to 9.99 Mpps
Pulse Output Mode	CW/CCW, OUT/DIR, AB Phase
Pulse Output Type	Differential / Single-End
Encoder Feedback Input Mode	CW/CCW; 1x/2x/4x AB Phase
Encoder Feedback Input Frequency	4 MHz (up to 16 MHz at 4x AB)
Position / Encoder Counter Resolution	32-bit
Motion I/O Interface Signals	
Emergency Stop Input	Configurable
Mechanical Signal Input	EL± / ORG / SD
Motion Interface IO	SVON / ERC / ALM / INP / RDY
GPIO Interface Signals	
GPIO Onboard	16-ch Optically Isolated DI 16-ch Optically Isolated DO
Digital Input Type	Source, 24VDC
Digital Output Type	Sink, 5~24VDC (Max:100mA)
GPIO Extended	16-ch Non-isolated TTL DI 16-ch Non-isolated TTL DO
Other I/O Interface Signals	
Pulsar Input	1-ch
Position Latch Input (Dedicated)	4-ch LTC (up to 1MHz)
Position Comparison Trigger Output (Dedicated)	4-ch CMP (up to 1MHz)
CMP Output Voltage Selection	5, 24 V or Open Collector
Position Latch Input (Configurable)	4-ch Optically Isolated DI (up to 10KHz) 4-ch Non-isolated TTL DI (up to 1MHz)
Position Comparison Trigger Output (Configurable)	8-ch Optically Isolated DO (up to 1MHz) 4-ch Non-isolated TTL DO (up to 1MHz)
General	
Main Connector	68-pin SCSI-Type Connector
Extend Connector	40-pin to 37-pin SCSI Box Header
Operating Temperature	0°C to +60°C
Storage Temperature	-20°C to +80°C
Humidity	5% to 95%, non-condensing
Environmental	
Safety Compliance	CE: EN 55032/55035 for Class B FCC: Part 15 B RoHS

Model Name	DIN-304C
Dimensions	200 x 107 x 44 mm (W x L x H)

LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

All products and company names listed are trademarks or trade names of their respective companies.
Updated Dec. 07, 2021. ©2021 ADLINK Technology, Inc. All Rights Reserved.
All specifications are subject to change without further notice.