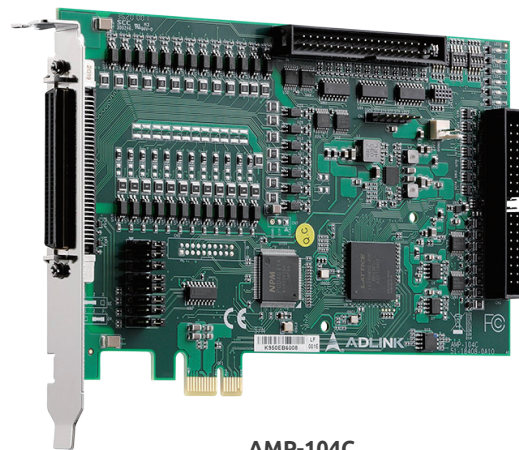# AMP-104C

4-Axis Pulse Motion Controller
Ideal for stepper motor control

General Features

- 4 Axes Pulse Type Motion Card for stepper motor control
- PCI Express® Gen1x1
- Supports Up to 16 Cards in One System
- Pulse Output Frequency Up to 4.9 Mpps
- Pulse Output Mode: CW/CCW, OUT/DIR
- Encoder Feedback Input Frequency Up to 20 MHz
- Mechanical Signal Input
- 28-CH Onboard Isolated GPIO / 31 CH Extended TTL GPIO
- 8-CH Position Latch Trigger Input
- Selection of Card Index by Switch
- Selection of EL Logic NO / NC Mode by Switch
- Selection of DO Initial State by Switch
- Selection of Motion Stop Method: EMG / Deceleration Stop
- External Start/Stop Control (STA/STP)
- Current Position Counter / Encoder Feedback Counter
- Programmable Interrupt Control
- Linear and S-curve Acceleration/Deceleration Control
- Speed Change On-The-Fly
- 3 Home Return Modes
- Linear Interpolation
- Security Protection for User's Program

AMP-104C

Introduction

The AMP-104C is a cost-effective 4-axis motion controller card with a PCI Express® interface that can generate a pulse train up to 4.9MHz to control a motor. With more general purpose IOs and 4-channel encoder feedback input, the AMP-104C can be used for a multitude of scenarios or applications.

As a motion controller, the AMP-104C provides non-symmetric acceleration and deceleration speed profile settings, T-curve and S-curve speed profile control, and selection of motion stop method. Also, changing speed on the fly with a single axis operation, linear Interpolation with any 2 axes, and simultaneously start/stop on multiple axes are also available.

Software Support

- **OS Information**

  Windows 7/8/10 (x86/x64)
- **Software Compatibility**

  • APS Function Library Support
  • Visual Studio VB.NET, C#, VC.NET Compatible
- **Software Recommendations**

  MotionCreatorPro2™ (MCP2)

Ordering information

Terminal Board
- **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

AMP-104C Starter Kit

  AMP-104C; terminal Board DIN-68S-01 and DIN-37D-01; cable ACL-10569-2, ACL-10137-2 and ACL-10437

Specifications

Model Name	AMP-104C
Pulse Type Motion Control	
Max. Axes	4
Pulse Output Frequency	0.5 pps to 4.9 Mpps
Pulse Output Mode	CW/CCW, OUT/DIR
Pulse Output Type	Differential / Single-End
Encoder Feedback Input Mode	CW/CCW; OUT/DIR; 1x/2x/4x AB Phase
Encoder Feedback Input Frequency	5 MHz (Up to 20 MHz at 4x AB)
Encoder Feedback Counter Resolution	32-bit
Positon Counter Resolution	24-bit
External Stop/Start Signal Pin	STP and STA
End Limit Signal Pin	PEL and MEL
Slow Down Signal Pin	PSD and MSD
Home Sensor	ORG
GPIO Onboard	16-CH Optically Isolated DI 12-CH Optically Isolated DO
GPIO Extended	16-CH Non-isolated TTL DI 15-CH Non-isolated TTL DO
General Specifications	
Main Connector	68-pin SCSI-Type Connector
Extend Connector	40-Pin Box Header to 37-Pin DSUB
Operating Temperature	0°C to +60°C
Storage Temperature	-20°C to +80°C
Humidity	5% to 85%, non-condensing
Power Consumption	
External Power Supply (Input)	24 VDC ± 5%