

PCI-8144

4-axis Stepper Motion Controller



Features

- 32-bit PCI bus, Rev. 2.2, 33 MHz
- Card index switch selection
- Pulse output rates up to 2.4 Mpps for stepper motor control
- Pulse output options: CW/CCW
- Speed change on-the-fly
- 3 home return modes
- Programmable acceleration and deceleration time
- Trapezoidal and S-curve velocity profile
- Simultaneously start/stop with external signal control (STA/STP)
- Programmable interrupt control
- Supports up to 12 cards in one system
- Security protection for user's program
- General purpose isolated I/O: 8 DI and 8 DO
- Emergency stop input via STP pin
- All digital I/O are 2500 V_{RMS} isolated
- More than 30 thread safe API functions
- 2-phase stepping motor excitation optional

Specifications

Pulse Type Motion Control

■ Number of Axes	4
■ Pulse Output Rate	0.5 pps to 2.4 Mpps
■ Max. Acceleration Rate	737 Mpps ²
■ Speed Resolution	16-bit

Motion Interface I/O Signals

■ I/O Pin	Differential and 2500 V _{RMS} optically isolated
■ End Limit Signal Pin	PEL and MEL
■ Slow Down Signal Pin	PSD and MSD
■ Home Sensor	ORG
■ GPIO	8 DI and 8 DO

General Specifications

■ Connector	68-pin SCSI-II-type connector
■ Operating Temperature	0°C to +50°C
■ Storage Temperature	-20°C to +80°C
■ Humidity	5% to 85%, non-condensing

Power Consumption

■ Power Supply (Input)	+24 Vdc ±5%
■ External Power Supply (Output)	+5 Vdc ±5%, 100 mA (max.)

Software Support

■ Windows® Platform

- Available for Windows 7/Vista (32-bit)/XP/2000
- Recommended programming environments: VB/VC++/BCB/Delphi
- Various sample programs with source code
- Customized API functions

■ MotionCreatorPro 2™

MotionCreatorPro 2 is a user-friendly Windows-based application development software package included with all distributed motion and I/O control modules. MotionCreatorPro 2 provides simple configuration and real-time statuses of modules, in addition to precise positioning control with no effort. (See page 1-21 for more information on MotionCreatorPro 2.)

Ordering Information

■ PCI-8144

4-axis stepper motion controller

Accessories

For more information on terminal boards & cables, please refer to page 6-29.

Terminal Board

■ DIN-68S-01

Terminal board with 68-pin SCSI-II connector with DIN socket

Cabling

■ ACL-10569-1

68-pin SCSI-II cable (mating with AMP-787082-7), 1 M

Pin Assignment

VDD	1	35	VDD
EGND	2	36	EGND
CW+	3	37	CW+
CWCCW+	4	38	CWCCW+
CCWPEL0	5	39	CCWPEL2
MEL0	6	40	MEL2
PSD0	7	41	PSD2
MSD0	8	42	MSD2
ORG0	9	43	ORG2
EGND	10	44	EGND
CW+	11	45	CW+
CWCCW+	12	46	CWCCW+
CCWPEL1	13	47	CCWPEL3
MEL1	14	48	MEL3
PSD1	15	49	PSD3
MSD1	16	50	MSD3
ORG1	17	51	ORG3
STP/EMG	18	52	STA
DIN0	19	53	DOUT0
DIN1	20	54	DOUT1
DIN2	21	55	DOUT2
DIN3	22	56	DOUT3
DIN4	23	57	DOUT4
DIN5	24	58	DOUT5
DIN6	25	59	DOUT6
DIN7	26	60	DOUT7
VDD	27	61	DO_COM
VDD	28	62	DO_COM
EGND	29	63	EGND
EX +24V	30	64	EX +24V
	31	65	
	32	66	
	33	67	
	34	68	