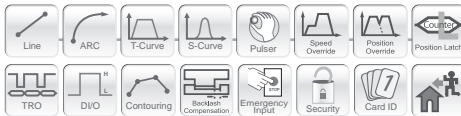


# PCI-8102

## Advanced 2-axis Stepper & Servo Motion Control Card



### Features

- 32-bit PCI bus, Rev. 2.2, 33 MHz
- Pulse output rates up to 6.55 MHz
- Pulse output options: OUT/DIR, CW/CCW
- 2 axes linear/circular interpolation
- Continuous interpolation
- Position/Speed change override
- 13 home return modes and auto home search
- Hardware position compare
- High-speed position latch function
- Programmable acceleration and deceleration time
- Trapezoidal and S-curve velocity profiles
- Multi-axis, simultaneous start/stop
- Programmable interrupt sources
- Supports up to 12 cards in one system
- Hardware backlash compensator
- Softwares limit function
- On-board GPIO: 16IN/16OUT (P2 connector)
- Card index switch setting
- Hardware emergency input
- Security protection for user's program
- Easy interface to any stepping motors, AC or DC servo, linear or rotary motors which have pulse train input mode
- All digital inputs and outputs are 2500 VRMS isolated
- Manual pulser input interface
- More than 100 thread safe API functions

### Applications

- Semiconductor front & back end equipment
- TFT/LCD manufacturing equipment
- Solar cell manufacturing equipment
- Electronic assembly and testing equipment
- Automatic optical inspection equipment
- Flight/Vehicle simulation in military applications and video games
- Dispenser machinery
- Cutting or carving machinery

### Specifications

#### Pulse Type Motion Control

■ Number of Axes	2
■ Pulse Output Rate	0.01 pps to 6.5 Mpps
■ Max. Acceleration Rate	245 Mpps <sup>2</sup>
■ Speed Resolution	16-bit
■ Encoder Input Rate	6.55 MHz under 4 x AB phase @ 1 M cable
■ Encoder Counter Resolution	28-bit
■ Positioning Range	-134,217,728 to +134,217,727 pulses (28-bit)
■ Counters	x 4 for each axis
■ Comparators	x 5 for each axis

#### Motion Interface I/O Signals

■ Position Latch Input Pin	LTC
■ Position Compare Output Pin	CMP
■ I/O Pin	Differential and 2500 VRMS optically isolated
■ Incremental Encoder Signals Input Pin	EA and EB
■ Encoder Index Signal Input	EZ
■ Mechanical Limit Switch Signal Input Pin	±EL, SD, and ORG
■ Servomotor Interface I/O Pin	INP, ALM, ERC, RDY, SVON
■ General DO Pin	x 16 (P2 connector)
■ General DI Pin	x 16 (P2 connector)
■ Pulser Signal Input	PA and PB
■ Simultaneous Start/Stop Signal I/O Pin	STA and STP

### Software Support

#### Windows® Platform

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

#### Linux Platform

- Redhat 9, kernel 2.4.x
- Fedora Core 5, kernel 2.6.15
- Fedora Core 3, kernel 2.6.9
- Fedora Core 4, kernel 2.6.11

#### MotionCreatorPro™

MotionCreatorPro™ assists motion system developers in debugging any cabling problems and resolving complex system configuration before programming.

### Ordering Information

#### ■ PCI-8102

Advanced 2-axis stepping & servo motion control card

### Accessories

#### Terminal Boards

##### ■ DIN-68S-01

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

##### ■ DIN-68M-J3A0

Terminal board for Mitsubishi MR-J3S-A servo amplifier with 68-pin SCSI-II connector

##### ■ DIN-68M-J2A0

Terminal board for Mitsubishi MR-J2S-A servo amplifier with 68-pin SCSI-II connector

##### ■ DIN-68Y-SG110

Terminal board for Yaskawa Sigma II/III/V servo amplifiers with 68-pin SCSI-II connector

##### ■ DIN-68P-A40

Terminal board for Panasonic MINAS A4 servo amplifier with 68-pin SCSI-II connector

#### Cabling

##### ■ ACL-10568-I

See Section 12, Accessories

##### ■ ACL-10569-I

See Section 12, Accessories