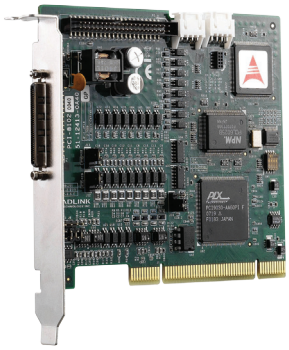
PCI-8102

Advanced 2-axis Servo & Stepper Motion Controller





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**

Software Support

OS Information
- Windows® 8/7/XP
- Linux
- RTX 5.x/6.x/8.1a

Software Compatibility
- VB/VC++/BCB/Delphi
- Various sample programs with source codes

Software Recommendations
- MotionCreatorPro 2

Specifications

Pulse Type Motion Control	
Number of Axes	2
Pulse Output Rate	0.01 pps to 6.5 Mpps
Max. Acceleration Rate	245 Mpps^2
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

Ordering Information

PCI-8102
Advanced 2-axis servo & stepper motion controller

Accessories

For more information on terminal boards & cables, please refer to page 6-31.

Terminal Boards

DIN-68S-01
Terminal board with 68-pin SCSI-II connector and DIN-rail mounting

DIN-68M-J3A0
Terminal board for Mitsubishi MR-J3A/J4A servo amplifiers

DIN-68M-J2A0
Terminal board for Mitsubishi MR-J2S-A servo amplifier

DIN-68Y-SGII0
Terminal board for Yaskawa Sigma V servo amplifier

DIN-68P-A40
Terminal board for Panasonic MINAS A4/A5 servo amplifiers with 60-pin SCSI-II connector

DIN-37D-01
Terminal board with one 37-pin D-sub connector and DIN-rail mounting (for additional DI/O usage)

Cabling

ACL-10568-1
68-pin SCSI-VHDCI cable (mating with AMP-787082-7), 1 M

ACL-10137-1MM
37-pin D-sub male/male cable, 1 M (for additional DI/O usage)

Pin Assignment

68-pin SCSI type Connector

VPP	1	35	VPP
EXGND	2	36	EXGND
OUT0+	3	37	OUT1+
OUT0-	4	38	OUT1-
DIR0+	5	39	DIR1+
DIR0-	6	40	DIR1-
SVON0	7	41	SVON1
ERC0	8	42	ERC1
ALM0	9	43	ALM1
INP0	10	44	INP1
RDY0	11	45	RDY1
EA0+	12	46	EA1+
EA0-	13	47	EA1-
EB0+	14	48	EB1+
EB0-	15	49	EB1-
EZ0+	16	50	EZ1+
EZ0-	17	51	EZ1-
VPP	18	52	VPP
N/C	19	53	EXGND
PEL0	20	54	PEL1
MEL0	21	55	MEL1
EXGND	22	56	EXGND
LTC/SD/PCS0/CLR0	23	57	LTC/SD/PCS1/CLR1
ORG0	24	58	ORG1
N/C	25	59	EXGND
PA+_ISO	26	60	EMG
PA-_ISO	27	61	DIN0
PB+_ISO	28	62	DIN1
PB-_ISO	29	63	DIN2
CMP0	30	64	DIN3
CMP1	31	65	DOUT0
EXGND	32	66	DOUT1
EXGND	33	67	EXGND
EX+24V	34	68	EX+24V

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