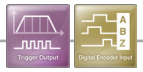
PCI-8124-C

Advanced 4-CH Encoder Card with High-Speed Triggering Function





Features

- 32-bit PCI bus, Rev. 2.2, 33 MHz
- Card index switch selection
- Four 32-bit quadrature encoder input and trigger output channels
- Encoder input interface: OUT/DIR, CW/CCW, and 1x, 2x, 4x A/B phase
- Trigger output up to 5 MHz
- Encoder input up to 20 MHz
- Programmable trigger pulse width: 0.1 us to 3.2765 ms
- Input/Output circuit source can be selectable: TTL/Open collector (with isolation)
- Switch setting for trigger output default level while power on
- Trigger output pin logic programmable
- Digital filter for individual encoder input channel
- Internal high-speed FIFO for four 32-bit comparators as data reload buffer
- Each channel can store 1,023 points (32-bit)
- Each trigger output channel is selected from all comparators, and manual trigger commands
- Each encoder counter source is selected from comparators and manual trigger commands
- Trigger Pulse Counter
- 14 comparators can select one of 4 trigger output channels individually
- 4 comparators for comparing encoder counter and FIFO data
- 10 comparators for comparing encoder counter and linear data
- 4 channel TTL output pins for general purpose output or trigger output
- 4 channel TTL input pins for general purpose or timer start signal
- 4 channel high speed latch input pins for counters
- EZ and Latch input pins can be used for general purpose input
- Encoder counter clear via EZ input pin as zero operation by rising or falling edge
- Programmable interrupt sources from linear data finished, triggered, FIFO empty/full/low, latched, and TTL input on

Specifications

Counter	
Number of Channels	4-CH
Trigger Pulse Frequency	5 MHz (max.)
Encoder Counter	4, 32-bit
Comparator	14, 32-bit
FIFO Capacity	1,023 points/channel
Encoder Input Frequency	20 MHz (max.) @ 4 x AB mode
Trigger Pulse Width	0.1 us to 3.2765 ms
I/O Signals	
Partial I/O Signals	Optically isolated with 2500 VRMS isolation voltage
Partial I/O Signals	TTL type
Encoder Signals Input Pins	EA and EB
Encoder Index Signal Input Pin	EZ
Position latch Input Pin	LTC
Trigger Pulse Output Pin	TRG, 5 V pulse output reference to ground
General Specifications	
Connectors	50-pin SCSI-type connector
Operating Temperature	0°C to +50°C (32°F to 122°F)
Storage Temperature	-20°C to +80°C (-4°F to 176°F)
Humidity	5% to 85%, non-condensing
Power Consumption	
Slot Power Supply (input)	900 mA (Max.) ±5%, 900 mA (Max.)
External Power Supply (output)	+5 VDC ±5%, 500 mA (Max.)

Software Support

- OS Information
  - Windows® 8/7/XP
  - RTX 5.x/6.x/8.1a
- Software Compatibility
  - VB/VC++/BCB/Delphi
  - Various sample programs with source codes
- Software Recommendations
  - TriggerMaster

Ordering Information

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Accessories

For more information on terminal boards & cables, please refer to page 3-30.

Terminal Board

- DIN-50S-01
  Terminal board with one 50-pin SCSI-II connector and DIN-rail mounting

Cabling

- ACL-10250-1
  50-pin SCSI-II cable (mating with AMP-787082-5), 1 M

Pin Assignment

INCOM1	1	26	INCOM3
LTC1	2	27	LTC3
INCOM2	3	28	INCOM4
LTC2	4	29	LTC4
OUTCOM1	5	30	OUTCOM3
TRG1	6	31	TRG3
OUTCOM2	7	32	OUTCOM4
TRG2	8	33	TRG4
EA1+	9	34	EA3+
EA1-	10	35	EA3-
EB1+	11	36	EB3+
EB1-	12	37	EB3-
EZ1+	13	38	EZ3+
EZ1-	14	39	EZ3-
EA2+	15	40	EA4+
EA2-	16	41	EA4-
EB2+	17	42	EB4+
EB2-	18	43	EB4-
EZ2+	19	44	EZ4+
EZ2-	20	45	EZ4-
TTL-IN1	21	46	TTL-IN3
TTL-IN2	22	47	TTL-IN4
TTL-OUT1	23	48	TTL-OUT3
TTL-OUT2	24	49	TTL-OUT4
DGND	25	50	DGND

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