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: 0.2 us to 6.5 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	0.2 us to 6.55 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
Storage Temperature	-20°C to +80°C
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

Windows® Platform

- Available for Windows Vista (32-bit)/XP/2000
- Recommended programming environments: VB/VC++/BCB/Delphi

TriggerMaster

The PCI-8124-C is currently available and supports Microsoft® Windows® XP and Microsoft® Windows® Vista (32-bit) operating system. An easy-to-use graphic user interface – "TRIGGER MASTER" was also provided to accelerate the developing time for AOI application. This utility is Windows-based application development software which is available to configure and observe the current compared point and trigger pulse output information. Also this utility can setup several mapping method that is able to link the PWM that support adjusting the trigger pulse width and pulse logic.

Ordering Information

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Accessories

See section 14 for more information on Accessories.

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