ICP DAS

PEX-1202L
PCI Express, 110 kS/s, 32-ch, 12-bit Multi-function Board
(1 K word FIFO)

PEX-1202H
PCI Express, 44 kS/s, 32-ch, 12-bit Multi-function Board
(1 K word FIFO)

Features

- PCI Express x1 Interface
- 16-channel 5 V/TTL Digital Input
- 16-channel 5 V/TTL Digital Output
- Pull-high/Pull-low Jumpers for DI Channels
- 12-bit, 32 Single-ended/16 Differential Analog Input channels
- Three External Triggers: Pre-trigger, Middle-trigger, Post-trigger
- 110 or 44 kS/s AD Sampling Rate
- Supports Card ID (SMD Switch)

CE UKCA FC RoHS

Introduction

The PEX-1202L/H series utilizes the PCI Express bus and is designed as an easy replacement for the PCI-1202 series without requiring any modification to either the software or the driver.

The PEX-1202L/H provides 32 single-ended or 16 differential Analog Input channels at 12-bit resolution, together with 16 TTL Digital Input and 16 TTL Digital Output channels. Data acquisition under DOS is gap-free and continuous, at 110 kHz for low gain and 44 kHz for high gain. The PEX-1202L/H also features "Magic Scan" and Continuous Capture functions.

The PEX-1202L/H includes a Card ID switch that enables the board to be easily recognized via software if two or more cards are installed in the same computer. The pull-high/low jumpers allow the DI status to be predefined instead of remaining floating if the DI channels are disconnected or line broken.

Software

Drivers

| ✓ | 32/64-bit Windows 10/11 | ✓ | Linux |

Sample Programs

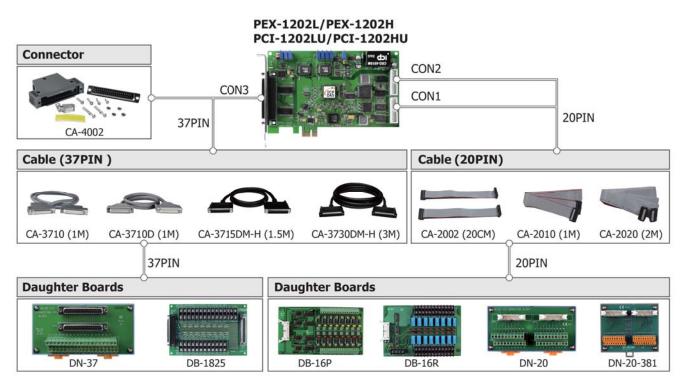| ✓ | DOS Lib and TC/BC/MSC Demo |
| ✓ | VB/VC/Delphi/VB.NET/C#.NET/VC.NET/LabVIEW/Python/MATLAB |

Pin Assignments

Pin Assign-ment	Terminal No.	Pin Assign-ment
AI_0	01	
AI_1	02	20 AI_16
AI_2	03	21 AI_17
AI_3	04	22 AI_18
AI_4	05	23 AI_19
AI_5	06	24 AI_20
AI_6	07	25 AI_21
AI_7	08	26 AI_22
AI_8	09	27 AI_23
AI_9	10	28 AI_24
AI_10	11	29 AI_25
AI_11	12	30 AI_26
AI_12	13	31 AI_27
AI_13	14	32 AI_28
AI_14	15	33 AI_29
AI_15	16	34 AI_30
A.GND	17	35 AI_31
Da1 out	18	36 Da2 out
Ext_Trg	19	37 D.GND
		CON3

Pin Assign-ment	Terminal No.		Pin Assign-ment
DO 0	01	02	DO 1
DO 2	03	04	DO 3
DO 4	05	06	DO 5
DO 6	07	08	DO 7
DO 8	09	10	DO 9
DO 10	10	12	DO 11
DO 12	12	14	DO 13
DO 14	14	16	DO 15
GND	16	18	GND
+5 V	18	20	+12 V
			CON1

Pin Assign-ment	Terminal No.		Pin Assign-ment
DO 0	01	02	DO 1
DO 2	03	04	DO 3
DO 4	05	06	DO 5
DO 6	07	08	DO 7
DO 8	09	10	DO 9
DO 10	11	12	DO 11
DO 12	13	14	DO 13
DO 14	15	16	DO 15
GND	17	18	GND
+5 V	19	20	+12 V
			CON2

Ordering Information

PEX-1202L CR	PCI Express, 110 kS/s, 32-ch, 12-bit Multi-function Board (1 K word FIFO)(RoHS) Includes one CA-4002 D-Sub connector
PEX-1202H CR	PCI Express, 44 kS/s, 32-ch, 12-bit Multi-function Board (1 K word FIFO) (RoHS) Includes one CA-4002 D-Sub connector

Hardware Specifications

Model	PEX-1202L	PEX-1202H
Analog Input		
Channels	32 Single-ended/16 Differential	
Resolution	12-bit, 8.5 µs Conversion Time	
FIFO Size	1024 Samples	
Accuracy	0.1% of FSR ±1 LSB @ 25°C, ±10 V	
Sampling Rate	110 kS/s	44 kS/s
Analog Output		
Channels	2	
Resolution	12-bit	
Accuracy	0.06% of FSR ±1 LSB @ 25°C, ±10 V	
Output Range	±5 V, ±10 V	
Digital Input		
Channels	16	
Compatibility	5 V/TTL	
Input Voltage	Logic 0: 0.8 V Max., Logic 1: 2.0 V Min.	
Response Speed	500 kHz (Typical)	
Digital Output		
Channels	16	
Compatibility	5 V/CMOS	
Output Voltage	Logic 0: 0.1 V Max., Logic 1: 4.4 V Min.	
Output Capability	Sink: 6 mA @ 0.33 V, Source: 6 mA @ 4.77 V	
Response Speed	500 kHz (Typical)	
Timer/Counter		
Channels	3	
Resolution	16-bit	
Reference Clock	Internal: 8 MHz	
General		
Bus Type	PCI Express x1	
Card ID	Yes (4-bit)	
Connectors	Female DB37 x 1, 20-pin Box Header x 2	
Power Consumption	1300 mA @ +3.3 V; 0 mA @ +12 V	
Operating Temperature	0°C to +60°C	
Humidity	5 to 85% RH, Non-condensing	

■ Accessories

	ADP-20/PCI CR	Extender, Extended dual 20-pin flat-cable connector to PC slot window (RoHS)
	CA-2002 CR	20-pin flat cable, 20 cm x 2 (RoHS)
	CA-2010 CR	20-pin flat cable, 1 M (RoHS)
	CA-2020 CR	20-pin flat cable, 2 M (RoHS)
	CA-3710 CR	DB-37 Male-Male D-sub cable 1 M (Cable for Daughter Board (45°)) (RoHS)
	CA-3710D CR	DB-37 Male-Male D-sub cable 1 M (Cable for Daughter Board (180°)) (RoHS)
	CA-3715DM-H CR	DB-37 Male-Male Cable, 1.5 M, 180°. (RoHS)
	CA-3730DM-H CR	DB-37 Male-Male Cable, 3.0 M, 180°. (RoHS)
	CA-4002 CR	37-pin Male D-sub connector with plastic cover. (RoHS)
	DB-1825 CR	Analog Input Screw terminal Board (RoHS)
	DB-16P CR	Isolated Digital Input Daughter Board (RoHS)
	DB-16R CR	Relay Output Daughter Board (RoHS)
	DN-20/DN-20-381 CR	20-pin DIN-RAIL mounting I/O connector board (RoHS)
	DN-37 CR	DIN Rail Mounting 37-pin Connector (RoHS)
	2AB125R CR	Resistor DIP 125R 0.1% 1/4W MF 50PPM (1PCS) (RoHS)

PEX-1202L/PEX-1202H
PCI-1202LU/PCI-1202HU

Connector — CA-4002
CON3 — 37PIN
CON2 / CON1 — 20PIN

Cable (37PIN): CA-3710 (1M), CA-3710D (1M), CA-3715DM-H (1.5M), CA-3730DM-H (3M)

Cable (20PIN): CA-2002 (20CM), CA-2010 (1M), CA-2020 (2M)

Daughter Boards (37PIN): DN-37, DB-1825

Daughter Boards (20PIN): DB-16P, DB-16R, DN-20, DN-20-381