PCI-1723 16-bit, 8-ch Analog Output PCI Card with 16-ch Digital I/O
Startup Manual

Packing List

Before card installation, please ensure that the following items are included in your shipment:

1. 1 x PCI-1723 card
2. 1 x Startup manual

If any of these items are missing or damaged, contact your distributor or sales representative immediately.

User Manual

For more detailed information regarding this product, please download the PCI-1723 user manual from the Advantech website.

Declaration of Conformity

FCC Class A

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause interference. In such cases, users are required to correct the interference at their own expense.

CE

This product has passed the CE test for environmental specifications when shielded cables are used for external wiring. We recommend using shielded cables. Such cables are available from Advantech. Please contact your local supplier for ordering information.

For more information about this or other Advantech products, please visit our website at

http://www.advantech.com

For technical support services, please visit our support website at

http://support.advantech.com

This manual is for PCI-1723.

Part No. 2003172321 Edition 2
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Specifications

Analog Output

Channels	8	
Resolution	16 bits	
Voltage output range	-10 ~ +10 V	
Current output range	0~20mA , 4~20mA	
Voltage Output Accuracy	Gain Error	< ±6 LSB
	Offset Error	< ±6 LSB
Current Output Accuracy	Gain Error	<±0.1% of FSR (after manual calibration), <±3% of FSR (without manual calibration)
	Offset Error	<±0.1% of FSR (after manual calibration), <±3% of FSR (without manual calibration)
Driving Capacity	5 mA max.	
Settling time	100 µs (to ±6 LSB of FSR)	

Digital Input /Output

Input Channels	16 (bi-directional)
Number of ports	2
Input Voltage	Low: 0.8 V max. High: 2.0 V min.
Output Voltage	Low: 0.5 V max. @ +24 mA (sink) High: 2.0 V min. @ -15 mA (source)

General

I/O Connector Type	68-pin SCSI-II female	
Dimensions	168 × 99 mm^2 (6.6 × 3.9 in.^{2})	
Power Consumption	Typical	+5 V @ 400mA
	Max	+5 V @ 820mA
Temperature	Operating	0 ~ 60 °C (32 ~ 158 °F)
	Storage	-40 ~ 70 °C (-40 ~ 185 °F)
Relative Humidity	Operating	10 to 90% RH, non-condensing
	Storage	5 ~ 95% RH non-condensing
Form Factor	PCI	

Board ID Switch

PCI-1723 is equipped with a built-in DIP switch (SW1) for defining the board ID of each module. When multiple cards are installed on the same chassis, the board ID switch can be used to identify the device number of each card.

SW1				
1	2	3	4	Board ID
ON	ON	ON	ON	0
ON	ON	ON	OFF	1
ON	ON	OFF	ON	2
ON	ON	OFF	OFF	3
ON	OFF	ON	ON	4
ON	OFF	ON	OFF	5
ON	OFF	OFF	ON	6
ON	OFF	OFF	OFF	7
OFF	ON	ON	ON	8
OFF	ON	ON	OFF	9
OFF	ON	OFF	ON	10
OFF	ON	OFF	OFF	11
OFF	OFF	ON	ON	12
OFF	OFF	ON	OFF	13
OFF	OFF	OFF	ON	14
OFF	OFF	OFF	OFF	15

Keep Last Status Jumper

An on-board jumper is used to configure the status of all output signals after system hot-reset. User can choose to reset all output signals to the default values after system hot-reset, or keep them as the status before hot-reset.

The configuration of the keep last status jumper is shown in below Table:

JP9	Description
(1:2)	Keep last status after hot reset
(2:3)	Not keep last status after hot reset

Software Installation

PCI-1723 is a high-density multiple channel analog PCI card. The product's user manual, drivers, and programming SDK are available on the Advantech website, and can be accessed using the link below. Simply search the product name "PCI-1723".

http://support.advantech.com.tw

Installation (Cont,)

Hardware Installation

After the device driver is installed, you can now install the PCI-1723 card in your computer.

Please follow the steps below to install the PCI-1723 card.

1. Touch any metal part of your computer to neutralize the static electricity that may be in your body.
2. Plug the card into a PCI slot. Do not use excessive force to avoid damaging the card.

Pin Assignments

NC	68	34	NC
VOUT0	67	33	VOUT1
AGND	66	32	AGND
IOUT0	65	31	IOUT1
NC	64	30	NC
AGND	63	29	AGND
VOUT2	62	28	VOUT3
AGND	61	27	AGND
IOUT2	60	26	IOUT3
NC	59	25	NC
AGND	58	24	AGND
VOUT4	57	23	VOUT5
AGND	56	22	AGND
IOUT4	55	21	IOUT5
NC	54	20	NC
AGND	53	19	AGND
VOUT6	52	18	VOUT7
AGND	51	17	AGND
IOUT6	50	16	IOUT7
NC	49	15	NC
AGND	48	14	AGND
DIO0	47	13	DIO1
DIO2	46	12	DIO3
DIO4	45	11	DIO5
DIO6	44	10	DIO7
DIO8	43	9	DIO9
DIO10	42	8	DIO11
DIO12	41	7	DIO13
DIO14	40	6	DIO15
DGND	39	5	DGND
NC	38	4	NC
NC	37	3	NC
NC	36	2	NC
+12V	35	1	+5V

Pin Assignments (Cont.)

Pin Name	Type	Pin#	Description
Analog Output			
VOUT0	O	67	Voltage output channel 0
VOUT1	O	33	Voltage output channel 1
VOUT2	O	62	Voltage output channel 2
VOUT3	O	28	Voltage output channel 3
VOUT4	O	57	Voltage output channel 4
VOUT5	O	23	Voltage output channel 5
VOUT6	O	52	Voltage output channel 6
VOUT7	O	18	Voltage output channel 7
IOUT0	O	65	Current output channel 0
IOUT1	O	31	Current output channel 1
IOUT2	O	60	Current output channel 2
IOUT3	O	26	Current output channel 3
IOUT4	O	55	Current output channel 4
IOUT5	O	21	Current output channel 5
IOUT6	O	50	Current output channel 6
IOUT7	O	16	Current output channel 7
Digital Input/Output			
DIO0	I/O	47	Digital input/output channel 0
DIO1	I/O	13	Digital input/output channel 1
DIO2	I/O	46	Digital input/output channel 2
DIO3	I/O	12	Digital input/output channel 3
DIO4	I/O	45	Digital input/output channel 4
DIO5	I/O	11	Digital input/output channel 5
DIO6	I/O	44	Digital input/output channel 6
DIO7	I/O	10	Digital input/output channel 7
DIO8	I/O	43	Digital input/output channel 8
DIO9	I/O	9	Digital input/output channel 9
DIO10	I/O	42	Digital input/output channel 10
DIO11	I/O	8	Digital input/output channel 11
DIO12	I/O	41	Digital input/output channel 12
DIO13	I/O	7	Digital input/output channel 13
DIO14	I/O	40	Digital input/output channel 14
DIO15	I/O	6	Digital input/output channel 15
Power and Ground			
+12V	-	35	+12 V power supply for external use
+5V	-	1	+5 V power supply for external use
AGND	-	14, 17, 19, 22, 24, 27, 29, 32, 48, 51, 53, 56, 58, 61, 63, 66	Analog ground
DGND	-	5, 39	Digital ground
Others			
NC	-	2 ~ 4, 15, 20, 25 ,30, 34, 36 ~ 38, 49, 54, 59, 64, 68	No connect.