



# ADVANTECH 32-Channel Isolated Digital Input Card User Manual

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## STARTUP MANUAL

### PCI-1733 32-channel Isolated Digital Input Card

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## Packing List

Before installation, please make sure that you have received the following:

- PCI-1733 card
- Driver CD
- Quick Start User Manual

If anything is missing or damaged, contact your distributor or sales representative immediately.

#### **User Manual**

For more detailed information on this product, please refer to the PCI-1730\_1733\_1734 User Manual on the CD-ROM (PDF format).

CD:DocumentsHardware ManualsPCIPCI-1730

## **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 which case the user is required to correct the interference at his own expense.

### **CE**

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

## **Overview**

The Advantech PCI-1733 is a 32-channel isolated digital input card for the PCI bus. For easy monitoring, each isolated digital input channel is equipped with one red LED, and each isolated digital output channel is equipped with one green LED to show its ON/OFF status. The PCI1733's isolated digital input channels are ideal for digital input in noisy environments or with floating potentials. The PCI- 1733 provides specific functions for different user requirements.

## **Specifications**

Isolated Digital Input

<b>Number of Channels</b>	32 (bi-directional)	
<b>Optical Isolation</b>	2,500 VDC	
<b>Opto-isolator response time</b>	100 ps	
<b>Over-voltage Protection</b>	70 VDC	
<b>Input Voltage</b>	VIH (max.)	30 VDC
	VIH (min.)	5 VDC
	VIL (max.)	2 VDC
<b>Input Current</b>	5 VDC	1.4 mA (typical)
	12 VDC	3.9 mA (typical)
	24 VDC	8.2 mA (typical)
	30 VDC	10.3 mA (typical)

## General

<b>I/O Connector Type</b>	37-pin D-Sub female	
<b>Dimensions</b>	175 mm x 100 mm ( 6.9" x 3.9" )	
<b>Power Consumption</b>	Typical	+5 V @ 200 mA +12 V @ 50 mA
	Max.	+5 V @ 350 mA
<b>Temperature</b>	Operation	0 – +60°C (32- 140°F ) (refer to IEC 68 -2 – 1 ,2)
	Storage	-20 – +70°C (-4 -158°F)
<b>Relative Humidity</b>	5 – 95% RH non-condensing (refer to IEC 60068-2-3)	
<b>Certification</b>	CE/FCC	

## Notes

For more information on this and other Advantech products, please visit our websites at:

<http://www.advantech.com>

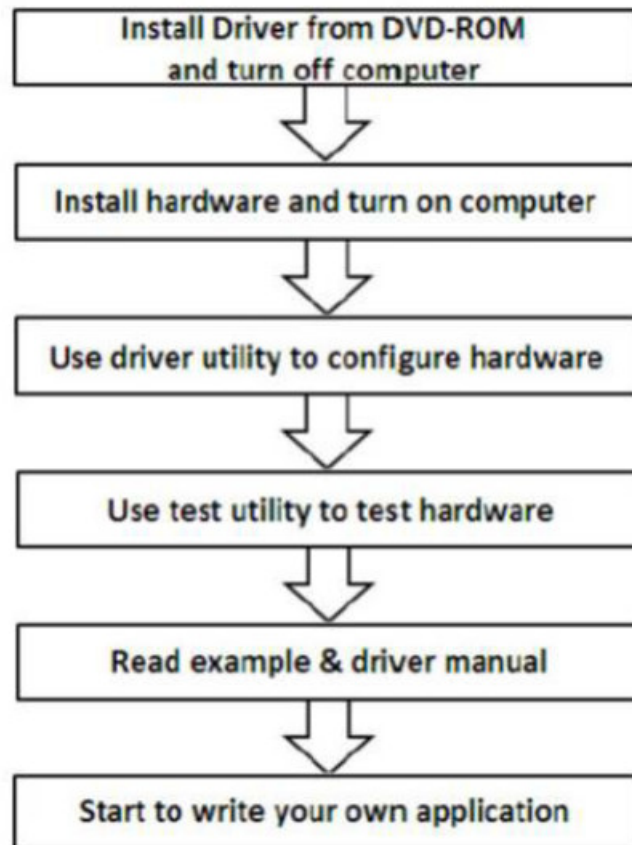
For technical support and service: <http://www.advantech.com/support/>

This startup manual is for PCI-1733. Part No: 2003173301

2nd Edition June 2015

1 Startup Manual

## Software Installation

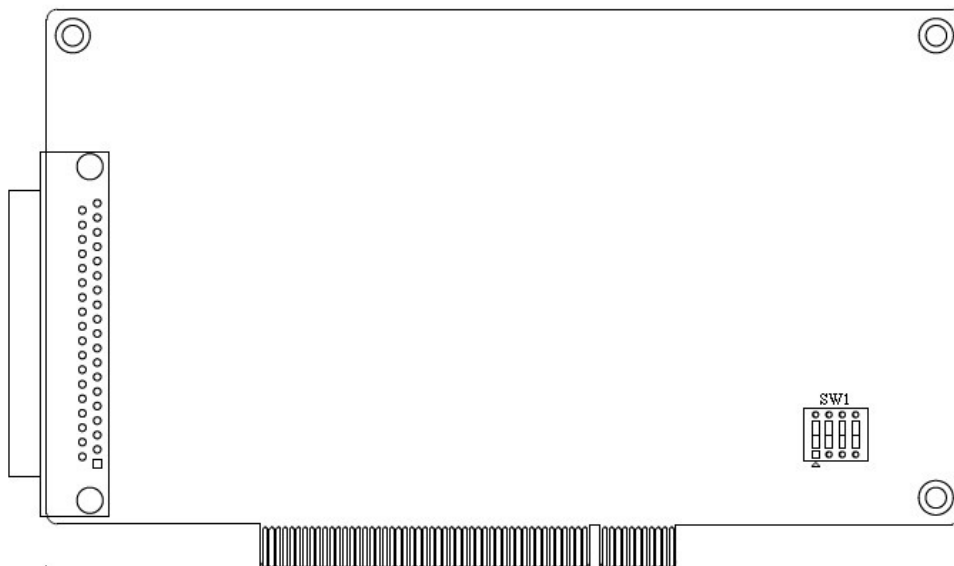


## Hardware Installation

1. Turn off your computer and unplug the power cord and cables. TURN OFF your computer before installing or removing any components on the computer.
2. Remove the cover of your computer.
3. Remove the slot cover on the back panel of your computer.
4. Touch the metal surface of your computer to neutralize any static electricity that may be on your body.
5. Insert the PCI-1733 card into a PCI slot. Hold the card only by its edges and carefully align it with the slot. Insert the card firmly into place. Use of excessive force must be avoided, otherwise, the card might be damaged.
6. Fasten the bracket of the PCI card on the back panel rail of the computer with screws.
7. Connect appropriate accessories (37-pin cable, wiring terminals, etc. if necessary) to the PCI card.
8. Replace the cover of your computer chassis. Reconnect the cables you removed in step 2.
9. Plug in the power cord and turn on the computer.

## Switch and Jumper Settings

The following figure shows card connector, jumper and switch locations .



## Board ID Settings

ID3	ID2	ID1	ID0	Board ID
1	1	1	1	0
1	1	1	0	1
1	1	0	1	2
1	1	0	0	3
1	0	1	1	4
1	0	1	0	5
1	0	0	1	6
1	0	0	0	7
0	1	1	1	8
0	1	1	0	9
0	1	0	1	10
0	1	0	0	11
0	0	1	1	12
0	0	1	0	13
0	0	0	1	14
0	0	0	0	15

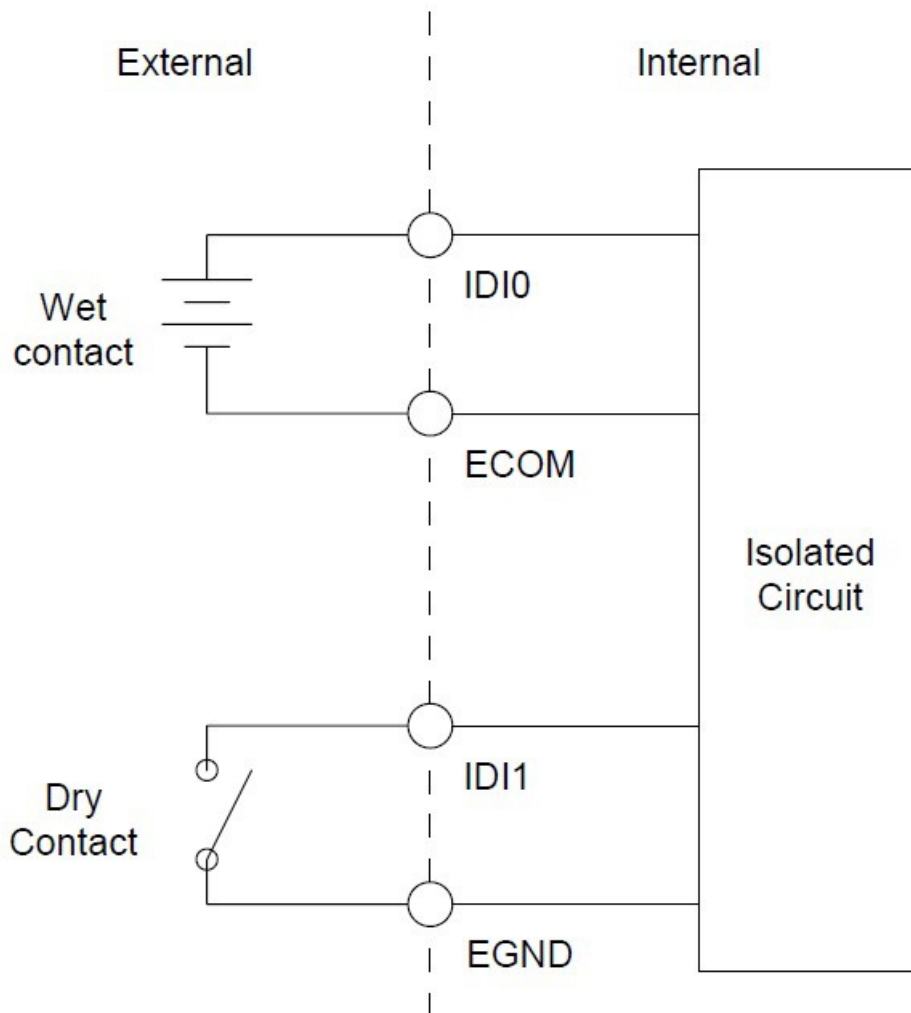
## PIN Assignments

IDI 0	1		
IDI 2	2	20	IDI 1
IDI 4	3	21	IDI 3
IDI 6	4	22	IDI 5
ECOM 0	5	23	IDI 7
IDI 9	6	24	IDI 8
IDI 11	7	25	IDI 10
IDI 13	8	26	IDI 12
IDI 15	9	27	IDI 14
IDI 16	10	28	ECOM 1
IDI 18	11	29	IDI 17
IDI 20	12	30	IDI 19
IDI 22	13	31	IDI 21
ECOM 2	14	32	IDI 23
IDI 25	15	33	IDI 24
IDI 27	16	34	IDI 26
IDI 29	17	35	IDI 28
IDI 31	18	36	IDI 30
EGND	19	37	ECOM 3

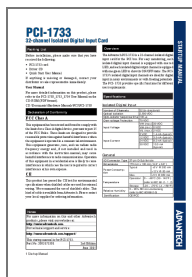
## Connection

### Isolated Digital Input

Each of the 16 isolated digital input channels accepts voltages from 5 to 30 V. Every eight input channels share one external common. (Channels 0 ~ 7 use ECOM0. Channels 8 ~ 15 use ECOM1.) The following figure shows how to connect an external input.



## Documents / Resources



[ADVANTECH 32-Channel Isolated Digital Input Card](#) [pdf] User Manual  
32-Channel Isolated Digital Input Card, PCI-1733

## References

- [A Advantech Co-Creating the Future of the IoT World](#)
- [A Online Support - Advantech](#)