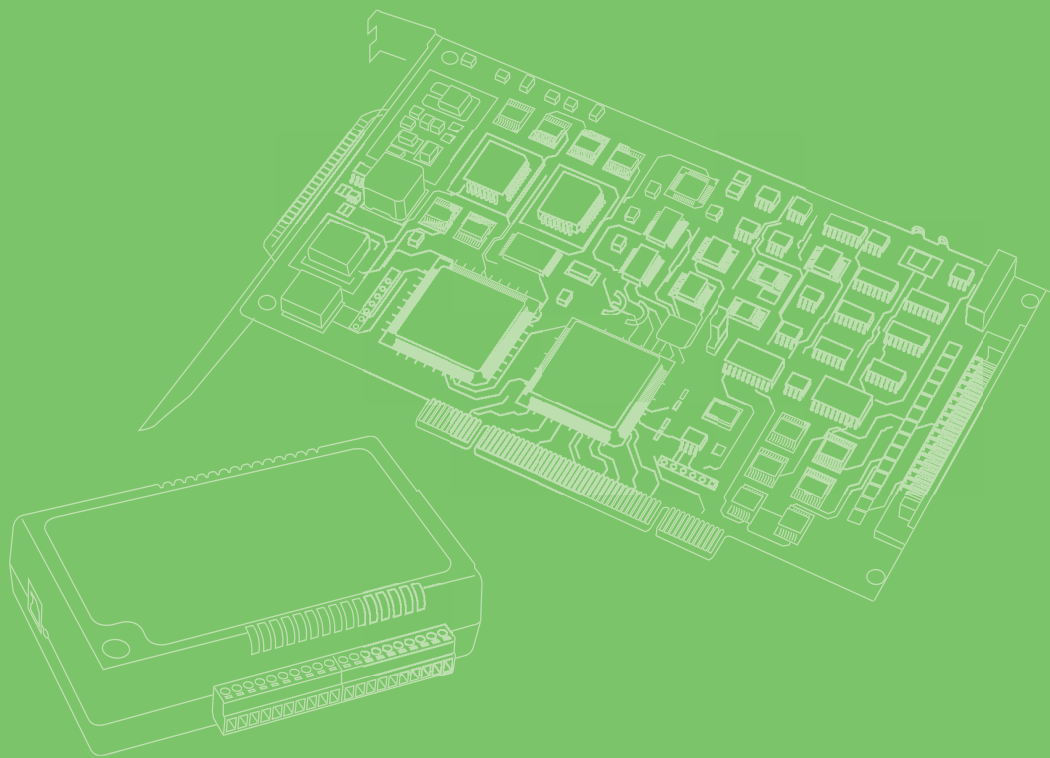# User Manual

PCI-1754

64-ch Isolated Digital Input PCI Card

ADVANTECH

Enabling an Intelligent Planet

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Product Warranty (2 years)

Advantech warrants to you, the original purchaser, that each of its products will be free from defects in materials and workmanship for two years from the date of purchase.

This warranty does not apply to any products which have been repaired or altered by persons other than repair personnel authorized by Advantech, or which have been subject to misuse, abuse, accident or improper installation. Advantech assumes no liability under the terms of this warranty as a consequence of such events.

Because of Advantech's high quality-control standards and rigorous testing, most of our customers never need to use our repair service. If an Advantech product is defective, it will be repaired or replaced at no charge during the warranty period. For out-of-warranty repairs, you will be billed according to the cost of replacement materials, service time and freight. Please consult your dealer for more details.

If you think you have a defective product, follow these steps:

1. Collect all the information about the problem encountered. (For example, CPU speed, Advantech products used, other hardware and software used, etc.) Note anything abnormal and list any onscreen messages you get when the problem occurs.

2. Call your dealer and describe the problem. Please have your manual, product, and any helpful information readily available.

3. If your product is diagnosed as defective, obtain an RMA (return merchandize authorization) number from your dealer. This allows us to process your return more quickly.

4. Carefully pack the defective product, a fully-completed Repair and Replacement Order Card and a photocopy proof of purchase date (such as your sales receipt) in a shippable container. A product returned without proof of the purchase date is not eligible for warranty service.

5. Write the RMA number visibly on the outside of the package and ship it prepaid to your dealer.

Declaration of Conformity

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.

FCC Class A

Note: 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 harmful interference in which case the user will be required to correct the interference at his own expense.

Technical Support and Assistance

1. Visit the Advantech web site at www.advantech.com/support where you can find the latest information about the product.
2. Contact your distributor, sales representative, or Advantech's customer service center for technical support if you need additional assistance. Please have the following information ready before you call:
   – Product name and serial number
   – Description of your peripheral attachments
   – Description of your software (operating system, version, application software, etc.)
   – A complete description of the problem
   – The exact wording of any error messages

Packing List

Before setting up the system, check that the items listed below are included and in good condition. If any item does not accord with the table, please contact your dealer immediately.

- PCI-1754 DAQ Card
- StartUp or User Manual
- Companion DVD-ROM with DAQNavi drivers included

Safety Precaution - Static Electricity

Follow these simple precautions to protect yourself from harm and the products from damage.

■ To avoid electrical shock, always disconnect the power from your PC chassis before you work on it. Don't touch any components on the CPU card or other cards while the PC is on.

■ Disconnect power before making any configuration changes. The sudden rush of power as you connect a jumper or install a card may damage sensitive electronic components.

Contents

Chapter **1**

Introduction

This chapter introduces the PCI-1754 cards and their typical applications.

Sections include:

■ Features

■ Applications

■ Installation Guide

■ Software Overview

■ Device Driver Roadmap

■ Accessories

1.1 Introduction

Thank you for buying the Advantech PCI-1754 which is a 64-ch isolated digital input card. It is an advanced-performance data acquisition card based on 32-bit PCI bus architecture. It features a unique circuit design and complete functions for data acquisition and control. The following sections of this chapter will provide further information about features of PCI-1754, a Quick Start for installation, together with some brief information on software and accessories.

1.2 Features

- 64 isolated digital input channels
- Wide input range (10 ~ 50 V_{DC})
- Either +/- voltage input for DI by group
- High over-voltage protection (70 V_{DC})
- High-voltage isolation (2,500 V_{DC})
- 2,000 VDC ESD protection
- Interrupt handling capability
- Board ID

PCI-1754 offers the following main features:

Robust Protection

The PCI-1754 features a robust isolation protection for applications in industrial, lab and machinery automation. The PCI-1754 can durably withstand a voltage up to 2,500 VDC, preventing your host system from any incidental harms.

Wide Input Range

The PCI-1754 has a wide range of input voltage from 10 to 50 V_{DC}, and it is suitable for most industrial applications with 12 V_{DC} and 24 V_{DC} input voltage. In the mean time, we are also ready to serve your special needs for specific input voltage range. Do not hesitate to ask us about tailoring our standard products to meet your specifications. All these merits make PCI-1754 the best choice for industrial applications.

Board ID Setting

The PCI-1754 has a built-in DIP switch that helps define each card's ID when multiple cards have been installed on the same PC chassis. The board ID setting function is very useful when users build their system with multiple PCI-1754 cards. With correct Board ID settings, you can easily identify and access each card during hardware configuration and software programming.

> **Note!** *For detailed specifications of the PCI-1754, please refer to Appendix A.*

1.3 Applications

- Industrial ON/OFF control
- Switch status sensing

- BCD interfacing
- Digital I/O control
- Industrial and lab automation

1.4 Installation Guide

Before you install your PCI-1754 card, please make sure you have the following necessary components:

- **PCI-1754 DAQ Card**
- **PCI-1754 Startup or User Manual**
- **Driver Software** Advantech DAQNavi software (included in DVDROM)
- **Wiring Cable** PCL-10250 or PCL-101100M (optional)
- **Wiring Board** ADAM-3951 or ADAM-39100 (optional)
- **Computer** PC or workstation with PCI Express bus slot (running Windows
- XP/Vista/7)

Other optional components are also available for enhanced operation:

- Advantech DAQ tools, LabView or other 3rd-party software

After you get the necessary components and maybe some accessories for enhanced operation for your DA&C card, you can then begin the Installation procedures. Figure 1.1 on the next page provides a concise flow chart to give users a broad picture of the software and hardware installation procedures:
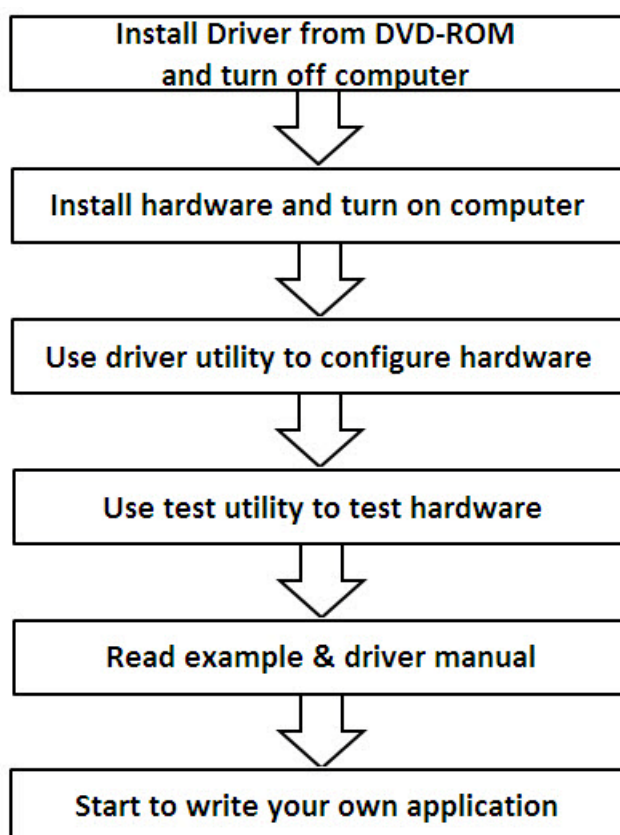
Figure 1.1 Installation Flow Chart

1.5 Software Overview

Advantech offers a rich set of DLL drivers, third-party driver support and application software to help fully exploit the functions of your PCI-1754 card:

- DAQNavi software (on the companion DVD-ROM)
- LabView driver
- Advantech DAQ tools

Programming choices for DA&C cards

You may use Advantech application software such as Advantech DAQNavi software. On the other hand, advanced users can use register level programming, although this is not recommended due to its laborious and time-consuming nature.

DAQNavi Software

Advantech DAQNavi software includes device drivers and SDK which features a complete I/O function library to help boost your application performance. This software is included in the companion DVD-ROM at no extra charge and comes with all Advantech DA&C cards. The Advantech DAQNavi software for Windows XP/Vista/7 works seamlessly with development tools such as Visual Studio .Net, Visual C++, Visual Basic and Borland Delphi.

Register-level Programming

Register-level programming is available for experienced programmers who find it necessary to write code directly at the level of the device register. Since register-level programming requires much effort and time, we recommend that you use the Advantech DAQNavi software instead. However, if register-level programming is indispensable, please contact the technical support team to request the relative information.

1.6 DAQNavi Device Driver Programming Roadmap

This section will provide you a roadmap to demonstrate how to build an application from scratch using Advantech DAQNavi device drivers with your favorite development tools such as Visual Studio.Net, Visual C++, Visual Basic and Borland Delphi. The step-by-step instructions on how to build your own applications using each development tool will be given in the DAQNavi SDK Manual. Moreover, a rich set of example source code is also given for your reference.

1.6.1 Programming Tools

Programmers can develop application programs with their favorite development tools:

- Visual Studio.Net
- Visual C++ and Visual Basic
- Borland Delphi

For instructions on how to begin programming works in each development tool, Advantech offers Tutorial Chapter in the DAQNavi SDK Manual for your reference. Please refer to the corresponding sections in this chapter on the DAQNavi SDK Manual to begin your programming efforts. You can also look at the example source code provided for each programming tool, since they can get you very well oriented.

The DAQNavi SDK Manual can be found on the companion DVD-ROM. Alternatively, if you have already installed the DAQNavi SDK on your system, the DAQNavi SDK Manual can be readily accessed through the Start button:

Start\Programs\Advantech Automation\DAQNavi\DAQNavi Manuals\DAQNavi SDK Manual

The example source code could be found under the corresponding installation folder such as the default installation path:

\Advantech\DAQNavi\Examples

For information about using other function groups or other development tools, please refer to the Using DAQNavi SDK chapter in the DAQNavi SDK Manual, or the video tutorials in the Advantech Navigator.

1.6.2 Programming with DAQNavi Device Drivers Function Library

Advantech DAQNavi device drivers offer a rich function library that can be utilized in various application programs. This function library consists of numerous APIs that support many development tools, such as Visual Studio .Net, Visual C++, Visual Basic and Borland Delphi.

According to their specific functions or services, APIs can be categorized into several function groups:

- Analog Input Function Group
- Analog Output Function Group
- Digital Input/Output Function Group
- Counter Function Group

For the usage and parameters of each function, please refer to the Using *DAQNavi SDK chapter in the DAQNavi SDK Manual.*

1.6.3 Troubleshooting DAQNavi Device Drivers Error

Driver functions will return a status code when they are called to perform a certain task for the application. When a function returns a code that is not success, it means the function has failed to perform its designated function. To troubleshoot the device drivers error, you can check the error code and error description within the Error Control of each function in the *DAQNavi SDK Manual*.

1.7 Accessories

Advantech offers a complete set of accessory products to support the PCI-1754 card. These accessories include:

Wiring Cables

■ **PCL-10250** The PCL-10250 is a 100-pin SCSI to two 50-pin SCSI shielded cable that specially designed for PCI-1754 card. It should be used with ADAM-3951 wiring board.

■ **PCL-101100M** The PCL-101100M cable is a 100pin SCSI shielded cable. It can be used with ADAM-39100 wiring board.

Wiring Boards

■ **ADAM-3951** The ADAM-3951 is a 50-pin SCSI wiring terminal module with LED indicators for DIN-rail mounting.

■ **ADAM-39100** The ADAM-39100 is a 100-pin SCSI wiring terminal module with DIN-rail mounting.

Chapter 2

Installation

This chapter provides a packaged item checklist, proper instructions for unpacking and step-by-step procedures for both driver and card installation.

Sections include:

- ■ **Unpacking**
- ■ **Driver Installation**
- ■ **Hardware Installation**
- ■ **Device Setup & Configuration**

2.1 Unpacking

After receiving your PCI-1754 package, please inspect its contents first. The package should contain the following items:

- PCI-1754 DAQ Card
- StartUp or User Manual
- Companion DVD-ROM with DAQNavi drivers included.

The PCI-1754 card harbor certain electronic components vulnerable to electrostatic discharge (ESD). ESD can easily damage the integrated circuits and certain components if preventive measures are ignored.

Before removing the card from the antistatic plastic bag, you should take the following precautions to ward off possible ESD damage:

- Touch the metal part of your computer chassis with your hand to discharge the static electricity accumulated on your body. Alternatively, one can also use a grounding strap.
- Touch the anti-static bag to a metal part of your computer chassis before opening the bag.
- Take hold of the card only by the metal bracket when removing it out of the bag.

After taking out the card, you should first:

- Inspect the card for any possible signs of external damage (loose or damaged components, etc.). If the card is visibly damaged, please notify our service department or our local sales representative immediately.
- Do not install a damaged card into your system.

Also, pay extra caution to the following aspects during installation:

- Avoid physical contact with materials that could hold static electricity such as plastic, vinyl and Styrofoam.
- Whenever you handle the card, grasp it only by its edges. DO NOT TOUCH the exposed metal pins of the connector or the electronic components.

Note! *Keep the anti-static bag for future use. You might need the original bag to store the card if you have to remove the card from a PC or transport it elsewhere.*

2.2 Hardware Installation

Note! *Make sure you have installed the driver before you install the card (please refer to Chapter 2.2 Driver Installation)*

After the Device Drivers installation is completed you can install the PCI-1754 card into any PCI slot on your computer. However, it is suggested that you refer to the computer's user manual or related documentation if you have any doubts. Please follow the steps below to install the card onto your system.

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 part on the surface of your computer to neutralize the static electricity that might be on your body.
5. Insert the PCI-1754 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 (100-pin cable, wiring terminals, etc. if necessary) to the PCI-1754 card.
8. Replace the cover of your computer chassis. Re-connect the cables you removed in step 2.
9. Plug in the power cord and turn on the computer.

After your card is properly installed on your system, you can now configure your device using the Advantech Navigator Program that has itself already been installed on your system during driver setup. A complete device installation procedure should include device setup, configuration and testing. The following sections will guide you through the Setup, Configuration and Testing of your device.

2.3 Device Setup & Configuration

The Advantech Navigator program is a utility that allows you to setup, configure and test your device, and later stores your settings on the system registry. These settings will be used when you call the APIs of DAQNavi device drivers. It also provides the programming reference, user guides and video tutorials.

Setting Up the Device

1. To install the I/O device for your card, you must first run the Advantech Navigator program (by accessing Start/Programs/ Advantech Automation/DAQNavi/ Advantech Navigator).

2. You can then view the device(s) already installed on your system (if any) on the Installed Devices list. If the software and hardware installation are completed, you will see PCI-1754 card in the Installed Devices list.
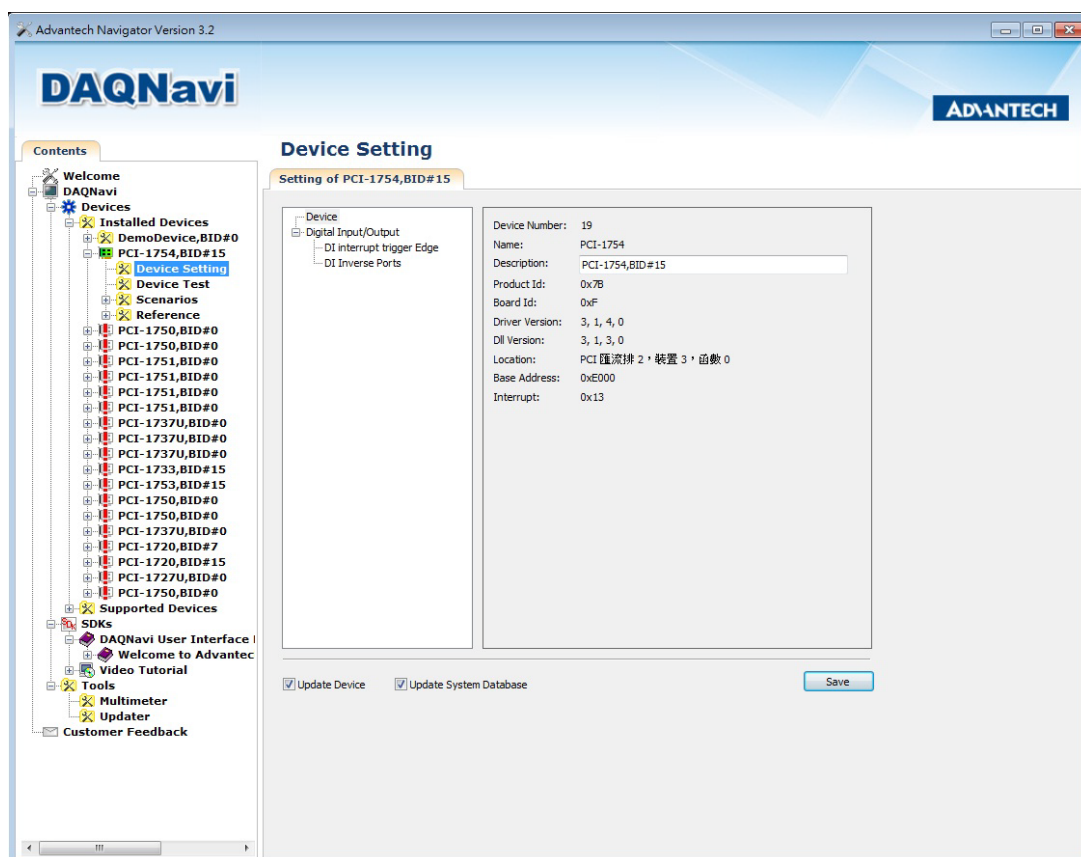
Figure 2.1 The Device Setting of PCI-1754

Configuring the Device

3. Please go to the Digital Input/Output page to configure your device. Here you can set the DI interrupt trigger edge, enable/disable the Channel-Freeze function and also the DO ports initial status of PCI-1754.
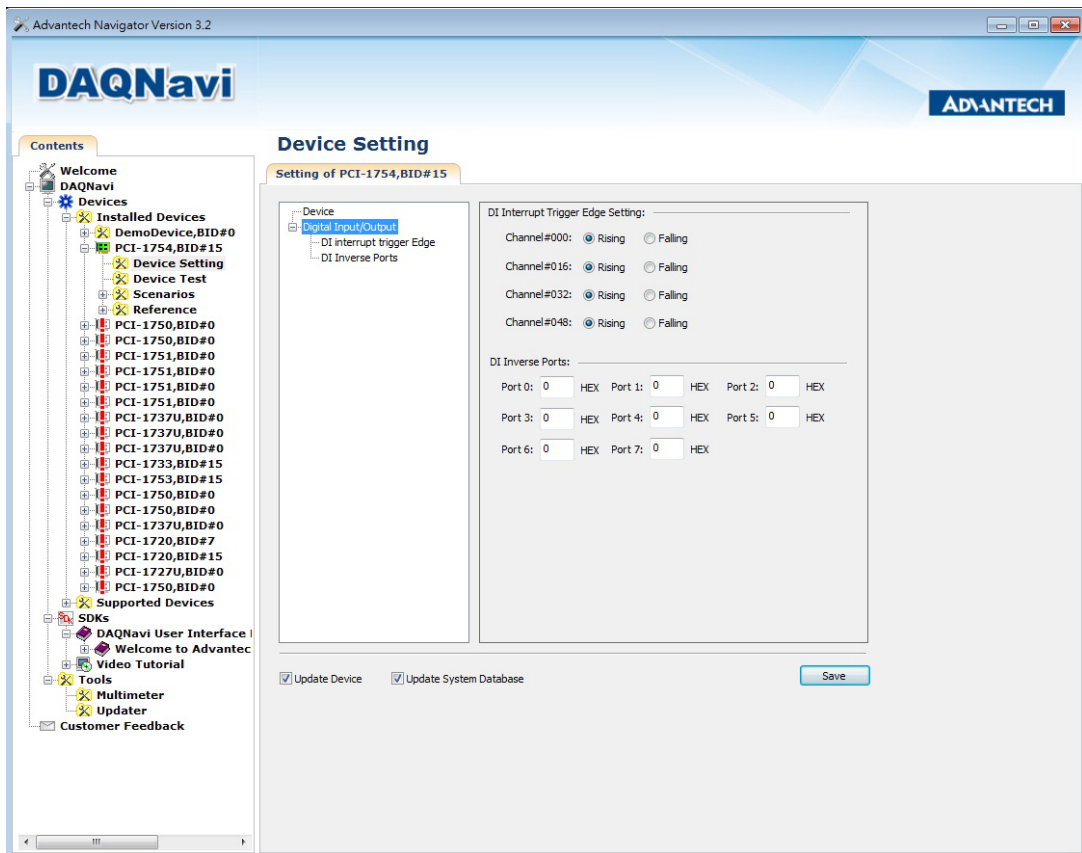
Figure 2.2 The Digital I/O Setting Page

4. After your card is properly installed and configured, you can go to the Device Test page to test your hardware by using the testing utility supplied.
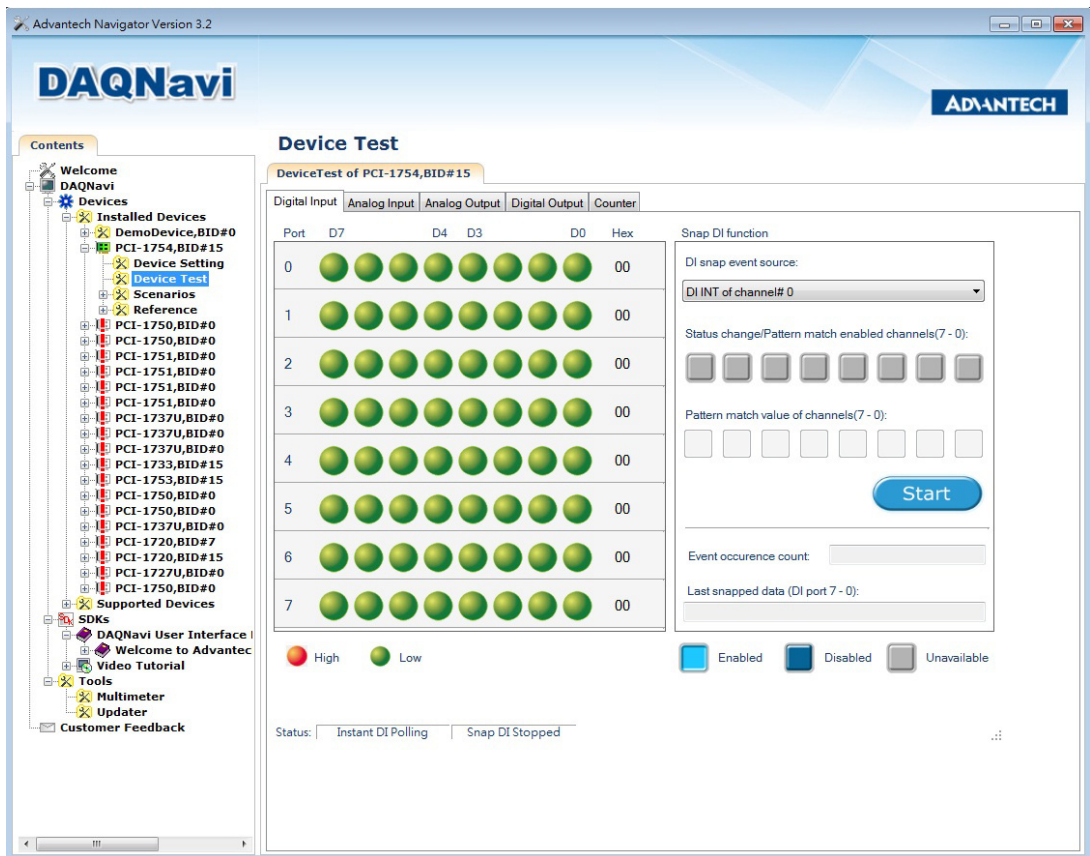
Figure 2.3 The Device Testing of PCI-1754

For more detailed information, please refer to the DAQNavi SDK Manual or the User Interface Manual in the Advantech Navigator.

Chapter 3

Signal Connections

This chapter provides useful information about how to connect input and output signals to the PCI-1754 cards via the I/O connector.

Sections include:

- Overview
- Switch
- Signal Connections
- Field Wiring Considerations

3.1 Overview

Maintaining signal connections is one of the most important factors in ensuring that your application system is sending and receiving data correctly. A good signal connection can avoid unnecessary and costly damage to your PC and other hardware devices. This chapter provides useful information about how to connect input and output signals to the PCI-1754 cards via the I/O connector.

3.2 Switch

Please refer to Figure 3.1 for jumper and switch locations on PCI-1754.
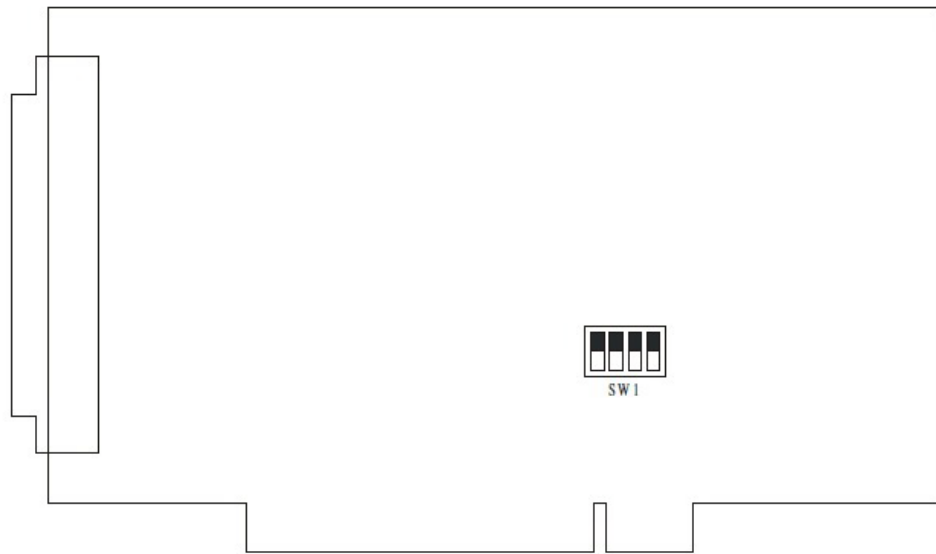
Figure 3.1 Connector and Switch Locations

3.2.1 Board ID (SW1)

The PCI-1754 have a built-in DIP switch (SW1), which is used to define each card's board ID. When there are multiple cards on the same chassis, this board ID switch is useful for identifying each card's device number. After setting for each PCI-1754, you can identify each card in system with different device numbers. The default value of board ID is 0 and if you need to adjust it to other value, please set the SW1 by referring to Table 3.1.

Table 3.1: Board ID Setting (SW1)				
BoardID (dec)		**Switch Position**		
* = default	1 (ID3)	2 (ID2)	3 (ID1)	4 (ID0)
0	ON	ON	ON	ON
1	ON	ON	ON	OFF
2	ON	ON	OFF	ON
3	ON	ON	OFF	OFF
4	ON	OFF	ON	ON
5	ON	OFF	ON	OFF
6	ON	OFF	OFF	ON
7	ON	OFF	OFF	OFF
8	OFF	ON	ON	ON
9	OFF	ON	ON	OFF
10	OFF	ON	OFF	ON
11	OFF	ON	OFF	OFF
12	OFF	OFF	ON	ON
13	OFF	OFF	ON	OFF
14	OFF	OFF	OFF	ON
15	OFF	OFF	OFF	OFF

Default Setting is 0.

3.3 Signal Connections

Pin Assignment

The I/O connector on the PCI-1754 is a 100-pin connector that enable you to connect to accessories with the PCL-10250 or PCL-101100M shielded cable.

Figure 3.2 shows the pin assignments for the 100-pin I/O connector on the PCI-1754, and Table 3.2 shows its I/O connector signal description.

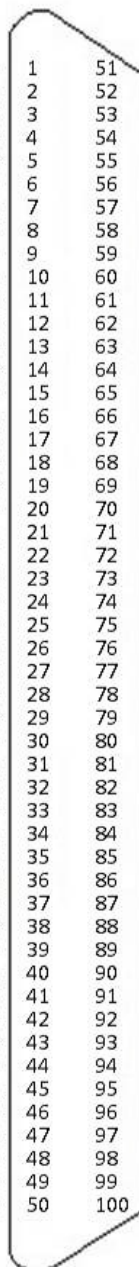|			
IDI0	1	51	IDI1
IDI2	2	52	IDI3
IDI4	3	53	IDI5
IDI6	4	54	IDI7
IDI8	5	55	IDI9
IDI10	6	56	IDI11
IDI12	7	57	IDI13
IDI14	8	58	IDI15
ECOM0	9	59	ECOM0
ECOM0	10	60	ECOM0
NC	11	61	NC
NC	12	62	NC
IDI16	13	63	IDI17
IDI18	14	64	IDI19
IDI20	15	65	IDI21
IDI22	16	66	IDI23
IDI24	17	67	IDI25
IDI26	18	68	IDI27
IDI28	19	69	IDI29
IDI30	20	70	IDI31
ECOM1	21	71	ECOM1
ECOM1	22	72	ECOM1
NC	23	73	NC
NC	24	74	NC
NC	25	75	NC
IDI32	26	76	IDI33
IDI34	27	77	IDI35
IDI36	28	78	IDI37
IDI38	29	79	IDI39
IDI40	30	80	IDI41
IDI42	31	81	IDI43
IDI44	32	82	IDI45
IDI46	33	83	IDI47
ECOM2	34	84	ECOM2
ECOM2	35	85	ECOM2
NC	36	86	NC
NC	37	87	NC
IDI48	38	88	IDI49
IDI50	39	89	IDI51
IDI52	40	90	IDI53
IDI54	41	91	IDI55
IDI56	42	92	IDI57
IDI58	43	93	IDI59
IDI60	44	94	IDI61
IDI62	45	95	IDI63
ECOM3	46	96	ECOM3
ECOM3	47	97	ECOM3
NC	48	98	NC
NC	49	99	NC
NC	50	100	NC

Figure 3.2 I/O Connector Pin Assignments

Note! *The PCL-10250 shielded cable is especially designed for the PCI-1754 to reduce noise in the signal lines. Please refer to Appendix C for the pin assignment of connecting PCL-10250 and ADAM-3951.*

3.3.1 I/O Connector Pin Definition

Table 3.2: I/O Connector Signal Descriptions

Pin Name	Reference	Direction	Description
IDI<00 ~ 15>	ECOM0	Input	Isolated digital input of group 0
IDI<16 ~ 31>	ECOM1	Input	Isolated digital input of group 1
IDI<32 ~ 47>	ECOM2	Input	Isolated digital input of group 2
IDI<48 ~ 63>	ECOM3	Input	Isolated digital input of group 3
ECOM0	-	Input	Common pin for IDI00~IDI15
ECOM1	-	Input	Common pin for IDI16~IDI31
ECOM2	-	Input	Common pin for IDI32~IDI47
ECOM3	-	Input	Common pin for IDI48~IDI63

3.3.2 Isolated Digital Input

Each of isolated digital input channels accepts bi-directional 10 ~ 50 V_{DC} voltage inputs. Meaning that you can apply positive or negative voltage to an isolated input pin (V_{IN}). Every 16 input channels share one common pin. Figure 3.3 shows how to connect an external input source to one of the card's isolated input channels.
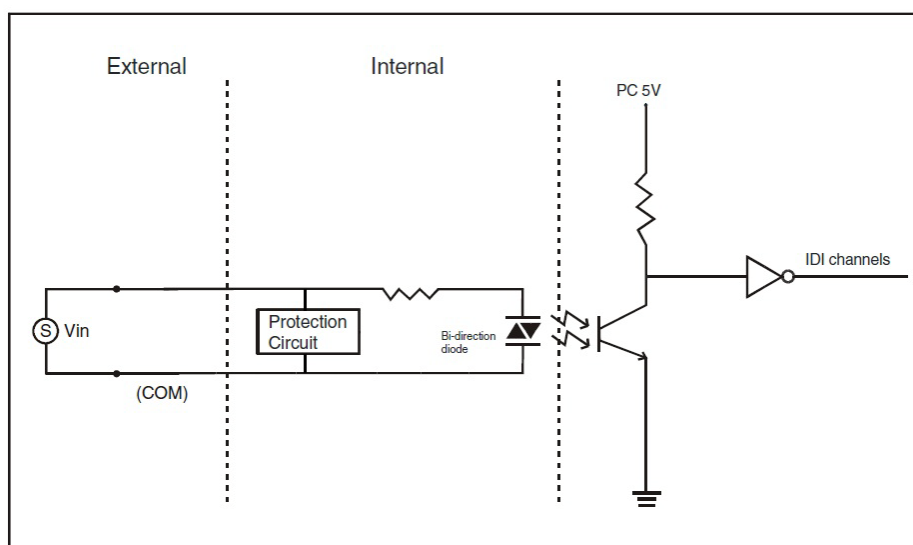

Figure 3.3 Isolated Digital Input Connection

3.4 Field Wiring Considerations

When you use PCI-1754 cards to acquire data from outside, noises in the environment might significantly affect the accuracy of your measurements if due cautions are not taken. The following measures will be helpful to reduce possible interference running signal wires between signal sources and the PCI-1754 card.

■ The signal cables must be kept away from strong electromagnetic sources such as power lines, large electric motors, circuit breakers or welding machines, since they may cause strong electromagnetic interference. Keep the analog signal cables away from any video monitor, since it can significantly affect a data acquisition system.

■ If the cable travels through an area with significant electromagnetic interference, you should adopt individually shielded, twisted-pair wires as the analog input cable. This type of cable has its signal wires twisted together and shielded with a metal mesh. The metal mesh should only be connected to one point at the signal source ground.

■ Avoid running the signal cables through any conduit that might have power lines in it.

■ If you have to place your signal cable parallel to a power line that has a high voltage or high current running through it, try to keep a safe distance between them. Alternatively, you can place the signal cable at a right angle to the power line to minimize the undesirable effect.

■ The signals transmitted on the cable will be directly affected by the quality of the cable. In order to ensure better signal quality, we recommend that you use the PCL-10250 or PCL-101100M shielded cable.

Appendix A

Specifications

A.1 Isolated Digital Input

Number of Input Channel	64	
Interrupt Inputs	4(IDI0,IDI16,IDI32,IDI48)	
Optical Isolation	2500 V_{DC}	
Opto-isolator Response Time	100 µs	
Over-voltage Protect	70 V_{DC}	
Input Resistance	5.2 KΩ	
Input Voltage	VIH (max.)	50 V_{DC}
	VIH (min.)	10 V_{DC}
	VIL (max.)	3 V_{DC}
Input Current	10 V_{DC}	1.70 mA (typical)
	12 V_{DC}	2.10 mA (typical)
	24 V_{DC}	4.40 mA (typical)
	48 V_{DC}	9.00 mA (typical)
	50 V_{DC}	9.40 mA (typical)

A.2 General

I/O Connector Type	100-pin SCSI female	
Dimensions	175 mm x 100 mm (6.8" x 3.9")	
Power Consumption	PCI-1754	+5 V @ 340 mA (typical)
		+5 V @ 450 mA (typical)
Temperature	Operation	0 ~ +60° C (32 ~ 140° F) (refer to IEC 68-2-1,2)
	Storage	-20 ~ +70° C (-4 ~ 158° F)
Relative Humidity	5 ~ 95% RH non-condensing (refer to IEC 60068-2-3)	
Certification	CE Class A certified	

A.3   Register Table

Register Format of PCI-1754.

Table A.1: Register Functions									
Base Addr. + Hex		**7**	**6**	**5**	**4**	**3**	**2**	**1**	**0**
0H	R	Isolated Digital Input Group 0							
		IDI7	IDI6	IDI5	IDI4	IDI3	IDI2	IDI1	IDI0
	W	N/A							
1H	R	Isolated Digital Input Group 0							
		IDI15	IDI14	IDI13	IDI12	IDI11	IDI10	IDI9	IDI8
	W	N/A							
2H	R	Isolated Digital Input Group 1							
		IDI23	IDI22	IDI21	IDI20	IDI19	IDI18	IDI17	IDI16
	W	N/A							
3H	R	Isolated Digital Input Group 1							
		IDI31	IDI30	IDI29	IDI28	IDI27	IDI26	IDI25	IDI24
	W	N/A							
4H	R	Isolated Digital Input Group 2							
		IDI39	IDI38	IDI37	IDI36	IDI35	IDI34	IDI33	IDI32
	W	N/A							
5H	R	Isolated Digital Input Group 2							
		IDI47	IDI46	IDI45	IDI44	IDI43	IDI42	IDI41	IDI40
	W	N/A							
6H	R	Isolated Digital Input Group 3							
		IDI55	IDI54	IDI53	IDI52	IDI51	IDI50	IDI49	IDI48
	W	N/A							
7H	R	Isolated Digital Input Group 3							
		IDI63	IDI62	IDI61	IDI60	IDI59	IDI58	IDI75	IDI56
	W	N/A							
8H	R	Group 0 Interrupt Control Register							
						F0	E0	INT0/E	L0/E
	W	Group 0 Interrupt Control Register							
						F0*	E0	INT0/E	L0/E
9H	R	N/A							
	W	N/A							

Address	R/W	Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0
AH	R	Group 1 Interrupt Control Register							
						F1	E1	INT1/E	L1/E
	W	Group 1 Interrupt Control Register							
						F1*	E1	INT1/E	L1/E
BH	R	N/A							
	W	N/A							
CH	R	Group 2 Interrupt Control Register							
						F2	E2	INT2/E	L2/E
	W	Group 2 Interrupt Control Register							
						F2*	E2	INT2/E	L2/E
DH	R	N/A							
	W	N/A							
EH	R	Group 3 Interrupt Control Register							
						F3	E3	INT3/E	L3/E
	W	Group 3 Interrupt Control Register							
						F3*	E3	INT3/E	L3/E
FH	R	N/A							
	W	N/A							

Address	R/W	Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0
10H	R	Board ID Register							
						BOID3	BOID2	BOID1	BOID0
	W	N/A							

Appendix B

Block Diagrams

B.1 Block Diagrams
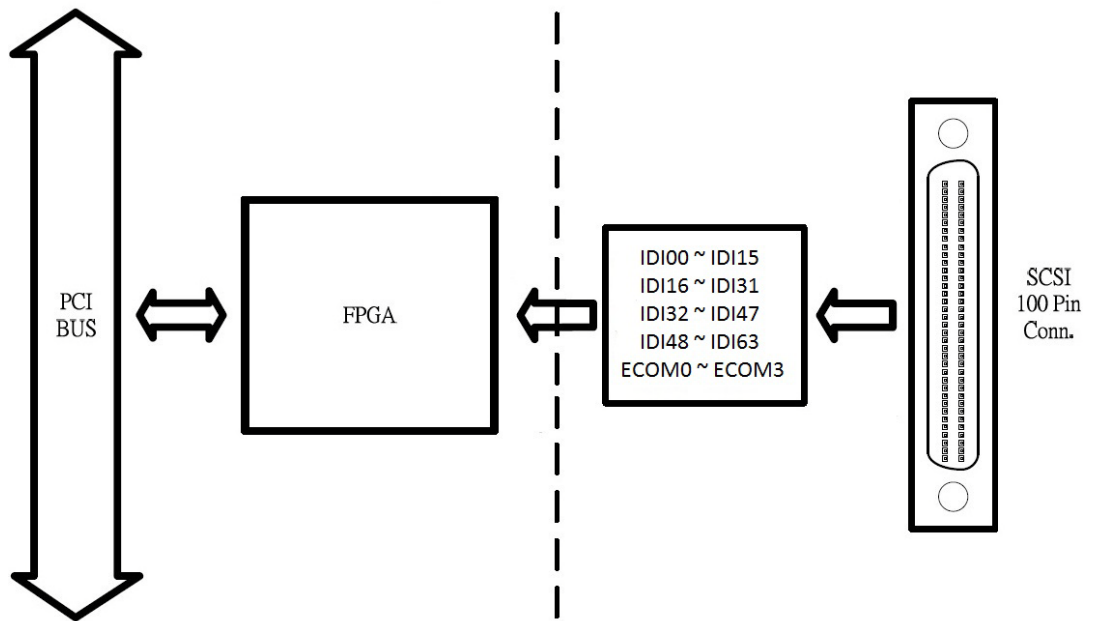
Appendix C

ADAM-3951 Pin
Assignment

C.1 ADAM-3951 Pin Assignment

Please refer to Figure C.1 and Figure C.2 for the pin assignments if you select Advantech ADAM-3951 as your wiring board for connecting to PCL-10250 and PCI-1754.

TB1		TB2	
1	IDI 00	26	IDI 16
2	IDI 01	27	IDI 17
3	IDI 02	28	IDI 18
4	IDI 03	29	IDI 19
5	IDI 04	30	IDI 20
6	IDI 05	31	IDI 21
7	IDI 06	32	IDI 22
8	IDI 07	33	IDI 23
9	IDI 08	34	IDI 24
10	IDI 09	35	IDI 25
11	IDI 10	36	IDI 26
12	IDI 11	37	IDI 27
13	IDI 12	38	IDI 28
14	IDI 13	39	IDI 29
15	IDI 14	40	IDI 30
16	IDI 15	41	IDI 31
17	ECOM0	42	ECOM1
18	ECOM0	43	ECOM1
19	ECOM0	44	ECOM1
20	ECOM0	45	ECOM1
21	NC	46	NC
22	NC	47	NC
23	NC	48	NC
24	NC	49	NC
25	NC	50	NC

Figure C.1 Connect to PCL-10250 CON1

TB1		TB2	
1	IDI 32	26	IDI 48
2	IDI 33	27	IDI 49
3	IDI 34	28	IDI 50
4	IDI 35	29	IDI 51
5	IDI 36	30	IDI 52
6	IDI 37	31	IDI 53
7	IDI 38	32	IDI 54
8	IDI 39	33	IDI 55
9	IDI 40	34	IDI 56
10	IDI 41	35	IDI 57
11	IDI 42	36	IDI 58
12	IDI 43	37	IDI 59
13	IDI 44	38	IDI 60
14	IDI 45	39	IDI 61
15	IDI 46	40	IDI 62
16	IDI 47	41	IDI 63
17	ECOM2	42	ECOM3
18	ECOM2	43	ECOM3
19	ECOM2	44	ECOM3
20	ECOM2	45	ECOM3
21	NC	46	NC
22	NC	47	NC
23	NC	48	NC
24	NC	49	NC
25	NC	50	NC

Figure C.2 Connect to PCL-10250 CON2

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