



PCI BUS 4 CHANNELS RELAY OUTPUT / 4 CHANNELS PHOTO ISOLATOR INPUT ADAPTER

OPERATION MANUAL



DECISION
Computer International Co., Ltd.



TABLE OF CONTENTS

CHAPTERS

1. Introduction.....	1
2. Unpacking Information.....	3
3. Hardware Installation.....	4
4. Hardware Configuration.....	5

APPENDICES

A. Warranty Information	10
B. Data Sheet.....	13

CHAPTER 1

INTRODUCTION

The PCI bus 4 channels relay output / photo isolator input adapter is a 32 bits PCI bus board with Plug and Play (PnP) features, it is a programmable I/O interface card for PC/486, Pentium, or compatibles. The PnP features let hardware configuration for IRQ and I/O address is detected by BIOS automatically, you don't need set switch and jumper.

The PCI bus 4 channels relay output / photo isolator input adapter provides relay output functions and photo isolator input functions. The relay output part provides 4 relays to drive 4 different output channels. Each relay channel can be used to control ON / OFF of external devices, to drive external high power relays, to activate alarms ... etc. The photo isolator input part provides 4 photo couple digital input channels, which allow the input signals to be completely floated and prevent the ground loop.

The PCI bus 4 channels relay output / photo isolator input adapter can be used to connect to terminal board, which provides relay output and photo couple digital input, and can be used to control SSR devices.

The features of the PCI bus 4 channels relay output / 4 photo isolator input adapter are:


- 32 bits PCI bus with Plug and Play (PnP) features.
- Support 4 relay output channels and 4 photo couple input channels.
- Max contact rating for relay: 120V AC/DC 1AMP.

- Attraction time for relay: 3 ms.
- Fall off time for relay: 2 ms.
- Isolation resistance for relay: 100M OHM.
- Life expectancy for relay: 100 million operations at signal level load.
- Allow the photo input signals to be completely floated and prevent the ground loops.
- Activation voltage: 0 to 20V.
 - 0 to 1.5V : inactive.
 - 3 to 20V : active.
- Supports terminal board and control SSR.



CHAPTER 2

UNPACKING INFORMATION

 **Check that your PCI bus 4 channels relay output/photo isolator input package includes the following items:**

- PCI bus 4 channels relay output/photo isolator input board.
- PCI bus 4 channels relay output/photo isolator input terminal board (option).
- Demo Program.
- User manual.
- Warranty form.



CHAPTER 3

HARDWARE INSTALLATION

Your PCI bus 4 channels relay output/photo isolator input adapter is designed to be inserted in any available PCI slot in your PC/486, Pentium or compatibles. In order to gain access to the expansion slots, follow the steps listed below:

1. Turn off all power to your computer and all peripheral devices before installing your 4 channels relay output/photo isolator input adapter.
2. Remove the cover of the computer.
3. Insert the 4 channels relay output/photo isolator input adapter into any available PCI slot. Make sure the adapter is firmly seated in the chosen slot.
4. Replace the cover of the computer.
5. Turn on the power of your computer, the PnP features will recognize the 4 channels relay output/photo isolator input adapter.

Put pcb layout of terminal board in here

1. I/O Address

The PnP feature will get base I/O address automatically, where

Base Address + 0:

Relay output channel 1 to 4

7	6	5	4	3	2	1	0
				RL4	RL3	RL2	RL1

Base Address + 0:

Photo isolator input channel 1 to 4.

7	6	5	4	3	2	1	0
IN4	IN3	IN2	IN1				

2. Jumper Setting



JP1A



JP1B

Jumper	Description
Open	Select opto+ and opto- Voltage Signal Input
Short	No Voltage Input

The JP1A and JP1B are used to select voltage signal of photo input channel 1, and the JP2A and JP2B are used to select voltage signal of photo input channel 2, ...etc. When we open both jumpers, it means we use opto+ and opto- signals as input voltage. Otherwise, when the jumpers are short, it means we need not input voltage from opto+ and opto-; in this mode, when opto+ and opto- are shorted,

the input signal is 1, when opto+ and opto- are open, the input signal is 0.

3. DB25 Connector Assignments

Pin	Description
1	Ground
2	Relay channel 1, COM
3	12V
4	Relay channel 2, COM
5	12V
6	Relay channel 3, COM
7	Ground
8	Relay channel 4, COM
9	12V
10	Opto channel 1, -
11	Opto channel 2, -
12	Opto channel 3, -
13	Opto channel 4, -
14	Relay channel 1, NC
15	Relay channel 1, NO
16	Relay channel 2, NC
17	Relay channel 2, NO
18	Relay channel 3, NC
19	Relay channel 3, NO
20	Relay channel 4, NC
21	Relay channel 4, NO
22	Opto channel 1, +
23	Opto channel 2, +
24	Opto channel 3, +
25	Opto channel 4, +

4. Terminal Board

When the SSR is built in the terminal board, then you can short JP5A and JP5B to control SSR1, JP6A and JP6B to control SSR2, ... etc.

The signal assignment of TB1, TB2, and TB3 are shown in the following:

TB	Description
1-01	Opto channel 1, -
1-02	Opto channel 1, +
1-03	Opto channel 2, -
1-04	Opto channel 2, +
1-05	Opto channel 3, -
1-06	Opto channel 3, +
1-07	Opto channel 4, -
1-08	Opto channel 4, +
2-01	Relay channel 1, NC
2-02	Relay channel 1, COM
2-03	Relay channel 1, NO
2-04	Relay channel 2, NC
2-05	Relay channel 2, COM
2-06	Relay channel 2, NO
2-07	Relay channel 3, NC
2-08	Relay channel 3, COM
2-09	Relay channel 3, NO
2-10	Relay channel 4, NC
2-11	Relay channel 4, COM
2-12	Relay channel 4, NO
3-01	SSR1+
3-02	SSR1-



3-03	SSR2+
3-04	SSR2-
3-05	SSR3+
3-06	SSR3-
3-07	SSR4+
3-08	SSR4-



APPENDIX A

WARRANTY INFORMATION

A.1 Copyright

Copyright 1999, 2000 DECISION COMPUTER INTERNATIONAL CO., LTD. All rights reserved. No part of 4 CHANNELS RELAY OUTPUT/PHOTO ISOLATOR INPUT ADAPTER software and manual may be reproduced, transmitted, transcribed, or translated into any language or computer language, in any form or by any means, electronic, mechanical, magnetic, optical, chemical, manual, or otherwise, without the prior written permission of DECISION COMPUTER INTERNATIONAL CO., LTD.

Each piece of 4 CHANNELS RELAY OUTPUT/PHOTO ISOLATOR INPUT ADAPTER package permits user to use 4 CHANNELS RELAY OUTPUT/PHOTO ISOLATOR INPUT ADAPTER only on a single computer, a registered user may use the program on a different computer, but may not use the program on more than one computer at the same time.

Corporate licensing agreements allow duplication and distribution of specific number of copies within the licensed institution. Duplication of multiple copies is not allowed except through execution of a licensing agreement. Welcome call for details.

A.2 Warranty Information

DECISION warrants that for a period of one year from the date of purchase (unless otherwise specified in the warranty card) that the goods supplied will perform according to the specifications defined in the user manual. Furthermore that the 4 CHANNELS RELAY





APPENDIX B

DATA SHEET

