ABOUT YOUR PCI-6503

Thank you for purchasing a National Instruments PCI-6503 board. The PCI-6503 is a 24-bit, general-purpose, parallel digital I/O interface for PCI bus computers. The PCI-6503 kit includes NI-DAQ driver software, which provides an extensive library of functions for digital I/O boards and other devices.

Documentation

PCI-6503

For detailed information about the PCI-6503, see the *PCI-DIO-96/PXI-6508/PCI-6503 User Manual*. This manual is available in electronic format on your NI-DAQ software distribution CD. If you prefer a hard copy of this manual, you can print it from the Acrobat reader or you can order a printed, bound copy from National Instruments (part number 320938-01).

The user manual provides detailed board installation and configuration instructions, signal connection information, theory of operation, programming information, and product specifications. The manual also contains warranty information and important warnings explaining the correct use of the PCI-6503.

NI-DAQ

If you are using NI-DAQ as your software interface to the PCI-6503, you should install the NI-DAQ software documentation from the NI-DAQ distribution CD in addition to installing the PCI-6503 hardware documentation. If you are using software other than NI-DAQ, use the documentation included with your software.

The PCI-6503 is a member of the DIO-24 family of digital I/O boards. References in the NI-DAQ documentation to the DIO-24 family of boards include the PCI-6503.

Installation

Software and Documentation

If you are using software other than NI-DAQ, consult your software documentation for software installation instructions.

Refer to the NI-DAQ release notes to install the NI-DAQ software and related documentation. When prompted during the software installation process to select components, select the option to install documentation. Choose the *PCI-DIO-96/PXI-6508/PCI-6503 User Manual* and any other documents you want, such as the NI-DAQ software documents.

To install the hardware documentation without installing NI-DAQ software, deselect all components other than the documentation option.

Hardware

After installing your software, you are ready to install the PCI-6503 board into your computer, as described in Chapter 2, *Installation and Configuration*, of the *PCI-DIO-96/PXI-6508/PCI-6503 User Manual.* The following are general installation instructions. Consult your computer user manual or technical reference manual for specific instructions about installing new devices in your computer. You can install a PCI-6503 in any available 5 V PCI expansion slot in your computer.

1. Turn off and unplug your computer.

2. Remove the top cover or access port to the expansion slots.

3. Remove the expansion slot cover on the back panel of the computer.

4. Touch the metal part inside your computer to discharge any static electricity that might be on your clothes or body.

5. Insert the PCI-6503 in a 5 V PCI slot. It may be a tight fit, but *do not* force the device into place.

6. Screw the mounting bracket of the PCI-6503 to the back panel rail of the computer.

7. Visually verify the installation.

8. Replace the top cover of your computer.

9. Plug in and turn on your computer.

I/O Connector

Figure 1 shows the PCI-6503 I/O connector. The PCI-6503 uses TTL-compatible voltage levels referenced from GND; do not connect any signal to a voltage below −0.3 V or above 5.3 V. For detailed information about the PCI-6503 signal connections, see Chapter 3, *Signal Connections*, in the *PCI-DIO-96/PXI-6508/PCI-6503 User Manual*.

(OBF_A^*) PC7	1	2	GND
(ACK_A^*) PC6	3	4	GND
(IBF_A^*) PC5	5	6	GND
(STB_A^*) PC4	7	8	GND
$(INTR_A^*)$ PC3	9	10	GND
(STB_B^*/ACK_B^*) PC2	11	12	GND
(IBF_B^*/OBF_B^*) PC1	13	14	GND
$(INTR_B^*)$ PC0	15	16	GND
PB7	17	18	GND
PB6	19	20	GND
PB5	21	22	GND
PB4	23	24	GND
PB3	25	26	GND
PB2	27	28	GND
PB1	29	30	GND
PB0	31	32	GND
PA7	33	34	GND
PA6	35	36	GND
PA5	37	38	GND
PA4	39	40	GND
PA3	41	42	GND
PA2	43	44	GND
PA1	45	46	GND
PA0	47	48	GND
+5 V	49	50	GND

Parenthetic names such as (OBF_A^*) indicate handshaking functions.

Figure 1. PCI-6503 I/O Connector

Support

Internet Support

E-mail: support@natinst.com
FTP Site: ftp.natinst.com
Web Address: http://www.natinst.com

Bulletin Board Support

BBS United States: 512 794 5422
BBS United Kingdom: 01635 551422
BBS France: 01 48 65 15 59

Fax-on-Demand Support

512 418 1111

Telephone Support (USA)

Tel: 512 795 8248
Fax: 512 794 5678

International Offices

Australia 03 9879 5166, Austria 0662 45 79 90 0, Belgium 02 757 00 20, Brazil 011 288 3336,
Canada (Ontario) 905 785 0085, Canada (Québec) 514 694 8521, Denmark 45 76 26 00, Finland 09 725 725 11,
France 01 48 14 24 24, Germany 089 741 31 30, Hong Kong 2645 3186, Israel 03 6120092, Italy 02 413091,
Japan 03 5472 2970, Korea 02 596 7456, Mexico 5 520 2635, Netherlands 0348 433466, Norway 32 84 84 00,
Singapore 2265886, Spain 91 640 0085, Sweden 08 730 49 70, Switzerland 056 200 51 51, Taiwan 02 377 1200,
United Kingdom 01635 523545

National Instruments Corporate Headquarters

6504 Bridge Point Parkway   Austin, Texas 78730-5039   USA   Tel: 512 794 0100