PCI-IIRO-8 AND PCI-IIRO-16

Isolated Digital Input/Output Cards

Specifications

- Universal PCI, PCI-X, 3.3V and 5V compatible
- Eight or sixteen optically isolated, non-polarized digital inputs
- Eight or sixteen electro-mechanical relay outputs
- Opto-isolated channel to channel and channel to ground
- Can detect input state change and assert interrupt
- Automatically detected under Windows 9x/NT/2000

MANUALS
PCI-IIRO-8.PDF

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PCI-IIRO-8
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ACCESSORIES
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FUNCTIONAL DESCRIPTION

The PCI-IIRO-8 and PCI-IIRO-16 are low-cost, half-size cards that provide isolated input and output for PCI-Bus computers. The cards have eight or sixteen optically-isolated digital inputs for AC or DC control signals and eight or sixteen electro-mechanical relay outputs. PCI-IIRO-8 occupies four consecutive eight-bit registers in I/O space. PCI-IIRO-16 occupies eight consecutive eight-bit registers in I/O space.

Inputs

The isolated inputs can be driven by either AC or DC and are not polarity sensitive. Input signals are rectified by a diode bridge and applied to the inputs of opto-isolators. A 470 ohm resistor in series provides current limiting. Standard 12/24 AC control transmitter outputs can be accepted as well as DC voltages. The input voltage range is 5V to 24V (rms). To extend the input voltage range, you may connect external resistors in series.

Each input circuit contains a switchable slow/fast filter that has a 10 millisecond (PCI-IIRO-8) or 5 millisecond (PCI-IIRO-16) time constant. (Without filtering, the response is 20 microseconds.) The filter must be selected for AC inputs in order to eliminate response to zero crossings. The filter is also valuable for use with slow DC input signals in a noisy environment. The filter may be switched out for DC inputs in order to obtain faster response. For the PCI-IIRO-16 the filters are globally controlled by software. For the PCI-IIRO-8 the filters can also be individually selected by switches on the card.

Interrupts

Interrupts are enabled/disabled by software. When the change-of-state detection circuit is enabled, the card asserts an interrupt whenever one or more of the interrupts changes state. Once an interrupt has been generated and serviced, it must be cleared by system software. This feature greatly frees up system resources by eliminating the need for constant polling to see when an input has changed state.

Outputs

The electro-mechanical relay outputs of the PCI-IIRO-8 are comprised of five form C SPDT outputs and three Form A SPST (normally-open) type. The outputs of the PCI-IIRO-16 are divided into two groups of eight, each group being similar to the PCI-IIRO-8. The relays are all de-energized at power-on. Data to the relays is latched.

Connections

For the PCI-IIRO-8, I/O is accessed via a 37 pin DBF connector on the mounting bracket of the card.

For the PCI-IIRO-16, I/O is accessed via a 78 pin DBF connector on the mounting bracket of the card. A molded breakout cable (model CAB78-37/2) is optionally available that divides the 78 pins into two DB37F connectors. Also available is a kit (model STB-37/2 Kit) which includes the cable and two STB-37 Screw

Terminal Cards that mount into an included one-foot length of Snap-Trak.

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Specifications

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Digital Inputs

- Number of inputs: 8 (PCI-IIRO-8) or 16 (PCI-IIRO-16)
- Type: Non-polarized, optically isolated from each other and from the computer. (not TTL/CMOS compatible)
- Voltage Range: 5 to 24V DC or AC (50 to 1000 Hz)
- Isolation: 500V*(see manual) channel to channel and channel to ground
- Input Resistance: 470 ohms in series with two diodes and an LED
- Response Time: 10 mSec w/filter, 20 uSec w/o filter

Relay Outputs

- Number of outputs: 8 (PCI-IIRO-8) or 16 (PCI-IIRO-16)
- Contact Rating: 2A carry current, bifurcated, gold clad, silver palladium
- Contact Arrangement: Channels 0-4 are SPDT Form C and channels 5-7 are SPST Form A. For PCI-IIRO-16, channels 8-12 are SPDT Form C and channels 13-15 are SPST Form A
- Contact Rating: Initial 100 milliohms maximum
- Contact Life: mech'l: 5 million operations minimum; elect'l: 5 million operations minimum at full load
- Operating Time: 2 milliseconds maximum
- Release Time: 1 milliseconds maximum
- Regulatory Approvals: UL and CSA

Interrupts

When enabled by software, interrupts are generated when digital inputs change state.

Power Required

+5VDC @ 0.675 A (all relays ON) for PCI-IIRO-8, or @ 0.750 A (all relays ON) for PCI-IIRO-16

Environmental

- Ambient Temperature: Operating: 0 to +70° C
- Storage: -20 to +70° C
- Humidity: 0 to 90 percent (non-condensing)
- Weight: Approx. 8 oz. (227 grams) for PCI-IIRO-8, approx. 12 oz. (340 grams) for PCI-IIRO-16
- Size: PCI-IIRO-8 is 6.15" (156 mm) long, PCI-IIRO-16 is 6.8" (173mm) long

Regulatory Compliance CE

Declaration of Conformity, and Test Reports are on file. Users must use appropriate shielded cables.

Part Number	Price(USD)
PCI-IIRO-8	239.00
PCI-IIRO-16	329.00
CAB78-37/2	70.00
STB-37/2 Kit	159.00

View / Download PCI-IIRO-8 Manual (in .PDF format)

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