ACCES I/O PRODUCTS, INC.

PCIe-IIRO-16

ISO-INPUT RELAY CARD w/COS

FEATURES

- 16 optically isolated, non-polarized digital inputs
- Switchable filters on inputs for electrically noisy environments
- Optically isolated channel to channel and channel to ground
- Can detect input state change and assert interrupt
- 16 electro-mechanical relay outputs
- Automatically detected under Windows

FUNCTIONAL DESCRIPTION

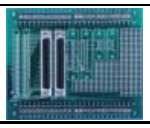
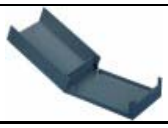
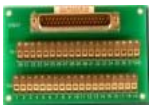
This product is a x1 lane PCIe isolated digital input and relay output board with Change of State (COS) detection capabilities.

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 1.8k 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 3V to 31VDC (or 40-10kHz RMS). To extend the input voltage range, you may connect external resistors in series.

The electro-mechanical relay outputs of the PCIe-IIRO-16 are comprised of ten form C SPDT outputs and six form A SPST (normally-open) type. The relays are all de-energized at power-on. Data to the relays is latched.

The card is 6.6 inches in length and 4.2 inches seated height. I/O wiring connections for this board are via a 78-pin D-sub connector. A molded round-wire “Y” cable is typically used to connect this card to termination panels with two 37-pin D-sub connectors.

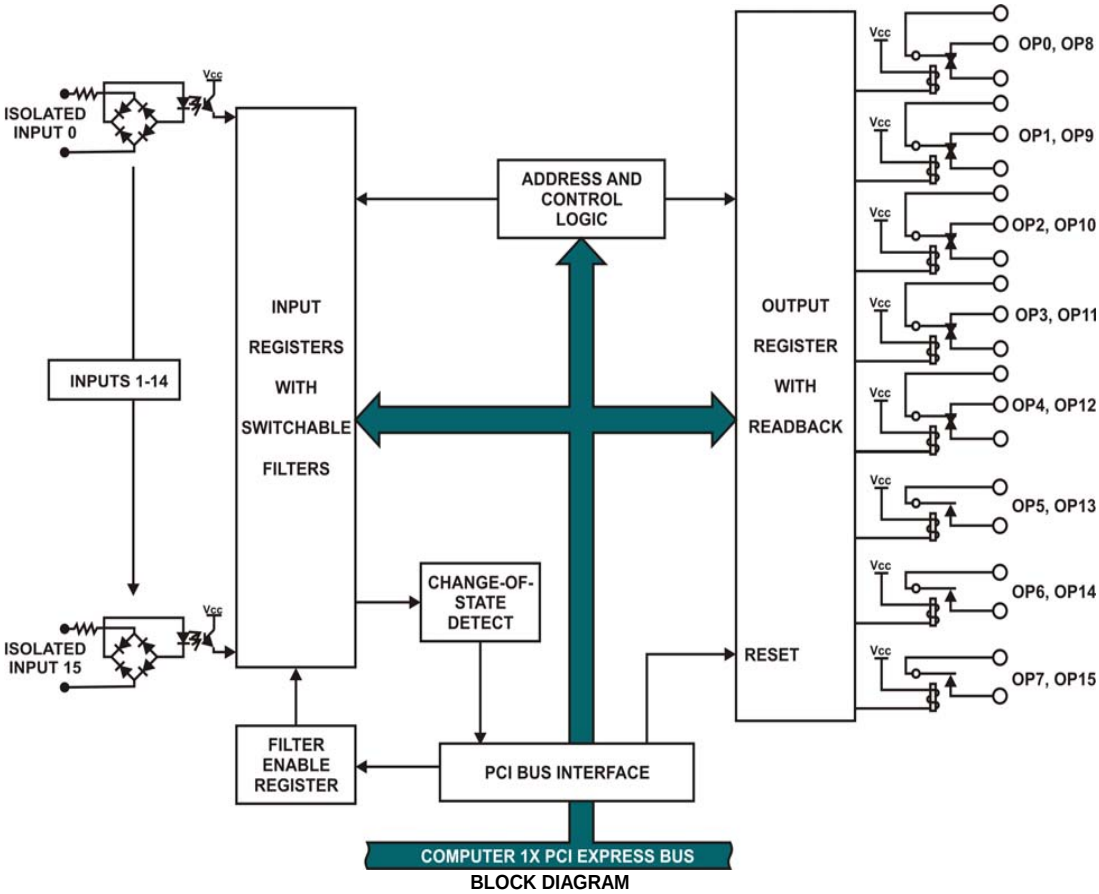
ACCESSORIES

STA-37	T-BOX	STB-37	DIN-SNAP-6
Screw terminal board mounted on standoffs with bread-board area	Metal enclosure with powder coated finish, use to mount STA-37 to panel	Screw terminal board, ships with standoffs but can also mount on SNAP-TRACK or DIN-SNAP	SNAP-TRACK for DIN-rail mounting one STB-37
			

SOFTWARE

The card is supported for use in most operating systems and includes a free DOS, Linux, and Windows 2000/XP/2003/Vista/7 compatible software package. This package contains sample programs and source code in Visual Basic, Delphi, and Visual C++ for Windows. Also provided is a graphical setup program in Windows. Linux support includes installation files and basic samples for programming from user level via an open source kernel driver. Third party support includes a Windows standard DLL interface usable from the most popular application programs. Embedded OS support includes Windows XPe.

10623 Roselle Street, San Diego, CA 92121 • (858) 550-9559 • Fax (858) 550-7322 • contactus@accesio.com • www.accesio.com
August 24th 2010



BLOCK DIAGRAM

SPECIFICATIONS

Digital Inputs

Number of inputs:	16
Type:	Non-polarized, optically isolated from each other and from the computer. (not TTL/CMOS compatible)
Voltage Range:	3 to 31V DC or AC (40 to 10kHz)
Isolation:	500V*(see manual) channel to channel and channel to ground
Input Resistance:	1.8k ohms in series with two diodes and a photo-coupler LED
Response Time:	10 mSec w/filter, 20 uSec w/o filter

Relay Outputs

Number of outputs:	16
Contact Rating:	2A carry current
Contacts:	Channels 0-4, 8-12 are SPDT Form C and channels 5-7, 13-15 are SPST Form A.
Contact Rating:	Initial 100 milliohms maximum
Contact Life:	mech'l: 5 million operations minimum; elect'l: 5 million ops min at full load
Operating Time:	2 milliseconds maximum
Release Time:	1 milliseconds maximum
Regulatory:	UL and CSA
Interrupts	Enabled by software, generated when digital inputs change state.

Power Required

+5VDC	0.750 A (all relays ON)

Environmental

Operating	0 to +55°C
Storage:	-40 to +85°C
Humidity:	5 to 90 percent (non-condensing)
Weight:	Approx. 8 oz. (227 grams)
Size:	6.15" (156 mm) long

ORDERING GUIDE

PCIe-IIRO-16 16 isolated inputs 16 relay outputs

DB37M Connector Pin Assignments

Signal Name	Pin	Signal Name	Pin
		IP7 (or 15)	1
IP7 (or 15)	20	IP6 (or 14)	2
IP6 (or 14)	21	IP5 (or 13)	3
IP5 (or 13)	22	IP4 (or 12)	4
IP4 (or 12)	23	IP3 (or 11)	5
IP3 (or 11)	24	IP2 (or 10)	6
IP2 (or 10)	25	IP1 (or 9)	7
IP1 (or 9)	26	IP0 (or 8)	8
IP0 (or 8)	27	OP7 C (or 15)	9
OP7 NO (or 15)	28	OP6 C (or 14)	10
OP6 NO (or 14)	29	OP5 C (or 13)	11
OP5 NO (or 13)	30	OP4 NC (or 12)	12
OP4 C (or 12)	31	OP4 NO (or 12)	13
OP3 NC (or 11)	32	OP3 C (or 11)	14
OP3 NO (or 11)	33	OP2 NC (or 10)	15
OP2 C (or 10)	34	OP2 NO (or 10)	16
OP1 NC (or 9)	35	OP1 C (or 9)	17
OP1 NO (or 9)	36	OP0 NC (or 8)	18
OP0 C (or 8)	37	OP0 NO (or 8)	19

ACCES I/O PRODUCTS, INC.

10623 Roselle Street, San Diego, CA 92121 • (858) 550-9559 • Fax (858) 550-7322 • contactus@accesio.com • www.accesio.com
August 24th, 2010

Assured Systems

Assured Systems is a leading technology company with over 1,500 regular clients in 80 countries, deploying over 85,000 systems to a diverse customer base in 12 years of business. We offer high-quality and innovative rugged computing, display, networking and data collection solutions to the embedded, industrial, and digital-out-of-home market sectors.

US

sales@assured-systems.com

Sales: +1 347 719 4508
Support: +1 347 719 4508

1309 Coffeen Ave
Ste 1200
Sheridan
WY 82801
USA

EMEA

sales@assured-systems.com

Sales: +44 (0)1785 879 050
Support: +44 (0)1785 879 050

Unit A5 Douglas Park
Stone Business Park
Stone
ST15 0YJ
United Kingdom

VAT Number: 120 9546 28
Business Registration Number: 07699660