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 Analog Output
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 Ethernet
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 PCI Bus Products
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Part #	\$US
PCI-IDO-48	\$299
PCI-IDO-32	\$245
PCI-IDO-16	\$184

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CAB50F-6
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STB-50
PCI-IDO-32 ACCESSORIES
CAB50-6
CAB50F-6
CAB50F-XX
DIN-SNAP
DIN-SNAP-6
SNAP-TRACK-6
STB-50
PCI-IDO-48 ACCESSORIES
CAB50-6
CAB50F-6
CAB50F-XX
DIN-SNAP
DIN-SNAP-6
SNAP-TRACK-6
STB-50

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PCI-IDO Series

16, 32, and 48 Channel Isolated Solid-State Output Cards

FEATURES

- 16, 32, or 48 individually optically isolated solid-state outputs
- Solid-state design permits high-speed switching and long-life expectancy
- Load voltages up to 60 Volts, current up to 2A
- Lower cost per point than externally-rackted solid-state relay modules
- Optically isolated channel to channel and channel to ground
- Universal PCI, PCI-X, 3.3V and 5V compatible

[Specifications](#)


FUNCTIONAL DESCRIPTION

PCI-IDO-xx Series cards offer a range of 16, 32, or 48 individual, optically isolated differential outputs. These cards are ideal for use in control and instrumentation applications where high-voltage protection is required. Individual channel-to-channel isolation allows every channel to be physically and electrically separated from the others.

The opto-isolated outputs use solid-state, P-Channel FET switches, providing a much faster turn-on and turn-off time and higher life expectancy than electromechanical relays. User-supplied load voltages can range from 5V to 60V.

The cards use up to six bytes of I/O bus address, one byte for each of eight bits of output. The logic on the chip allows the application to read what was written to the latches. Diodes are included across the load for inductive-spike protection.

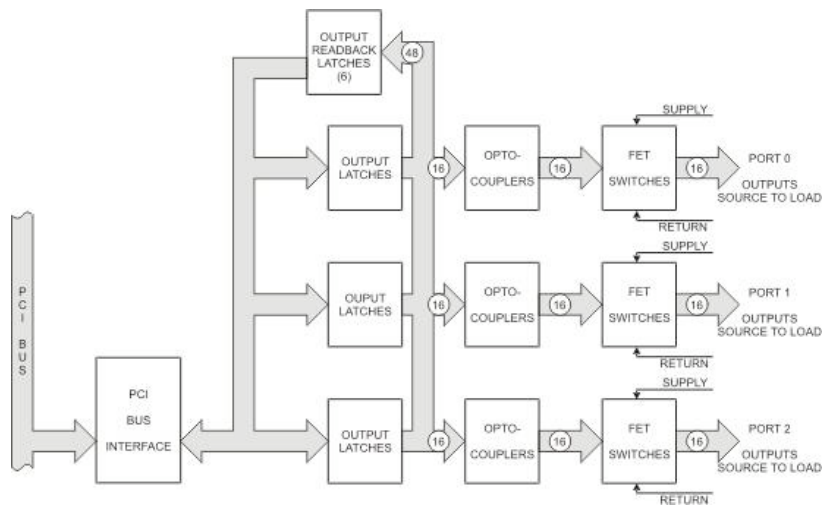
These cards are especially useful in applications where high common-mode external voltages are present. Isolation is required to guard electronics from transient voltage spikes and offers greater common-mode noise rejection in electronically noisy surroundings containing industrial machinery and inductive loads. These applications include factory automation, energy management, industrial ON/OFF control, security systems, manufacturing test, and process monitoring. In addition to protecting industrial applications from accidental contact with high external voltages, the isolation provided eliminates troublesome ground loops. Connections are available via 50-pin IDC type headers, ribbon cables, and a variety of screw terminal boards. A strain relief bar where the cables exit the card assures that the cables will not interfere with adjacent cards. Standard cables are six feet long but alternate lengths are available.

SOFTWARE

These cards are supported for use in most operating systems and include a free DOS, Linux (including Mac OS X) and Windows 98/NT/2000/XP/2003 compatible software package. This package contains sample programs and source code in "C" for DOS, and Visual Basic, Delphi, C++ Builder, and Visual C++ for Windows. Also incorporated 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, and includes example LabVIEW VIs. Embedded OS support includes Windows XPe.

Specifications

[Return to top of page](#)



Outputs

- Number of Channels: 16, 32, or 48
- Load Voltage Range: 5V to 60V (Voltage supplied by User)
- Load Current per Channel: 1A max. steady state, 2A pulse (Note: Current may be limited by the cable. Certain ribbon cables limit current to 0.5A.)
- Isolation: Optically isolated Channel-to-ground and channel-to-channel (* see note)
- Switching Time:
 - Turn-On 50 μ s
 - Turn-Off 5 μ s, inductive-spike protection via a diode
- Switch Resistance: 0.4 Ω when saturated
- Switch Leakage Current: 100 to 300 μ A
- Power Required: +5VDC @ 245mA (48 bits)

*Note on Isolation: Opto-Isolators and connectors are rated for at least 500V, but isolation voltage breakdowns will vary and are affected by factors like cabling, spacing of pins, spacing between traces on the PCB, humidity, dust and other environmental factors. This is a safety issue so a careful approach is required. For CE certification, isolation was specified at 60V DC. The design intention was to eliminate the influence of common mode. Use proper wiring techniques to minimize voltage between channels and to ground. Tolerance of higher isolation voltage can be obtained on request by applying a conformal coating to the board.

Environmental

- Operating Temperature Range: 0 $^{\circ}$ C to +70 $^{\circ}$ C
- Storage Temperature Range: -40 $^{\circ}$ C to +150 $^{\circ}$ C
- Humidity: 5% to 90% RH, non-condensing
- Board Dimensions: 6.875" (174.6mm) long

Regulatory Compliance

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

Part Number	Price (USD)
PCI-IDO-48	299.00
PCI-IDO-32	245.00
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[Return to top](#)

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