

Traditional PC Adapter Card

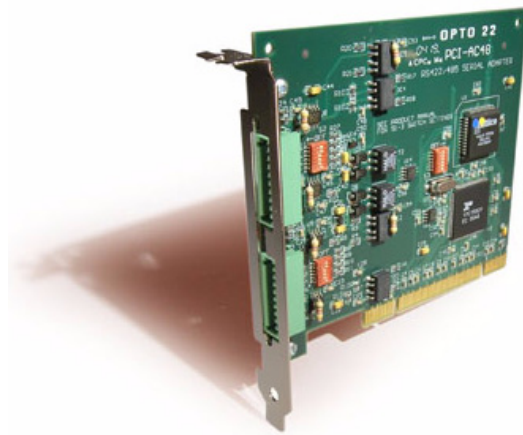
Features

- Compatible with standard 33 MHz PCI bus.
- Reliable communication.
- Buffering on the card prevents loss of data.
- Isolated from transient voltages.
- Provides tri-state control in hardware, 64-byte FIFO, and 16550 UART-compatible registers.

Description

The PCI-AC48 is an isolated, high-speed adapter card designed to link RS-485 serial devices, such as Opto 22's B3000 brains, with computers using the Peripheral Component Interconnect (PCI) bus of today's personal computers. The PCI-AC48 is compatible with computers that feature a standard 33 MHz PCI bus. This adapter card is ideal for customers who have been using Opto 22's AC37 adapter card but must upgrade to a newer computer that uses the PCI bus rather than the ISA bus.

Two RS-485 serial ports provide reliable communication. These ports can be used as two 2-wire ports or as one 4-wire port (two- and four-wire modes cannot be used at the same time). Buffering on the card prevents loss of data, and the serial communication lines and the adapter card itself are isolated from transient voltages. The adapter card also provides tri-state control in hardware, 64-byte FIFO, and 16550 UART-compatible registers.

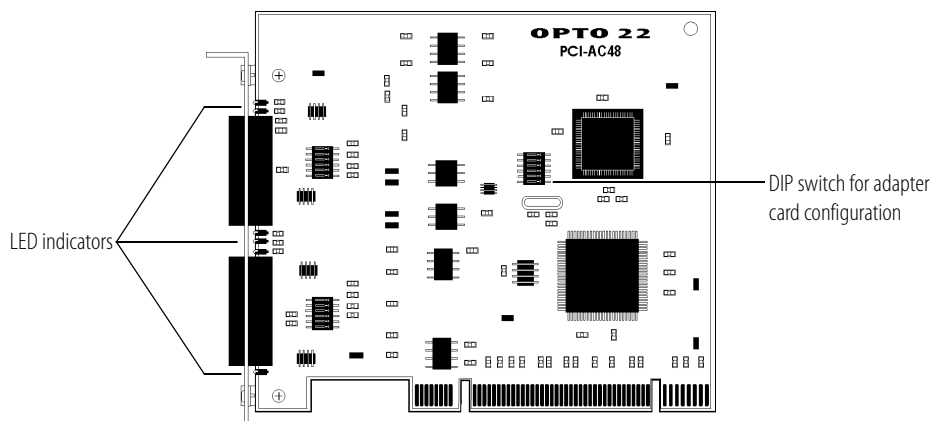


PCI-AC48 RS-485 Serial Adapter Card

The PCI-AC48 adapter card requires 5 VDC @ 600 mA (provided by the PCI bus) and operates at temperatures of 0 °C to 70 °C. The card is configured using DIP switches. Six LEDs on the card indicate bus operation or user application status.

Software Drivers

Included software drivers for Microsoft® Windows® 2000 or Windows XP let applications access the adapter card ports as standard COM ports. Drivers are shipped with the adapter card and can also be downloaded from the Opto 22 Web site. For details on installing and using the PCI-AC48 card and drivers, see Opto 22 form #1520, the *PCI-AC48 User's Guide*.



Part Numbers

Part	Description
PCI-AC48	Adapter Card: PCI Bus to RS-485 Serial

Traditional PC Adapter Card

mistic™ Remote I/O and Optomux® I/O

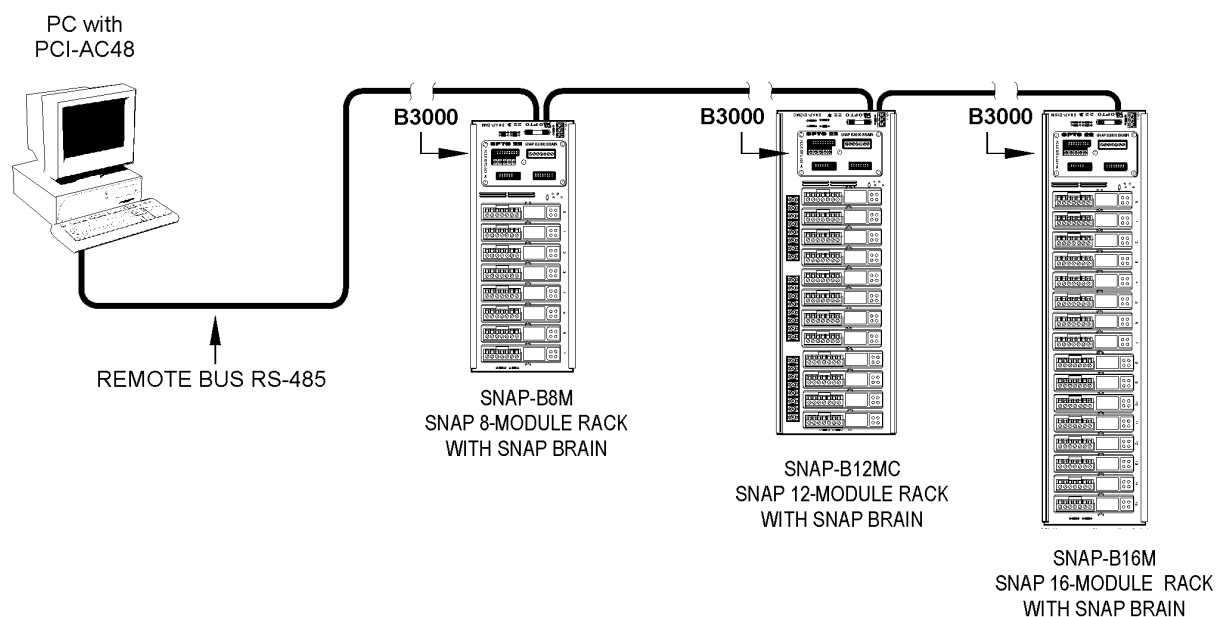
The PCI-AC48 adapter card supports communication to Opto 22 mistic remote I/O as well as Opto 22's Optomux I/O. A mistic remote I/O bus uses one twisted-pair cable for communication; however, a second pair can optionally be used in systems needing mistic interrupt capability. The communication cable must be terminated

at both ends of the cable (the PCI-AC48 will usually be at one end). The communication cable must also be biased at one location only, typically also at the PCI-AC48 card. Bias and termination are set using DIP switches.

Specifications

Computer Interface	32-bit, 33 MHz PCI bus, PCI Specification Revision 2.2
Ports	Two serial ports, configurable for the following: <ul style="list-style-type: none"> • Two ports when used in RS-485 2-wire mode, or • One port when used in RS-485 4-wire mode
Isolation	2,500 VAC transient
Communications	RS-485 2-wire or 4-wire operation
Baud Rates	Serial link to 460,800 baud
Cable Length Distance	Up to 3,000 ft. (915 m) @ 115,200 baud
Termination	200 Ohm termination for RS-485 and IRQ (DIP switch configurable)
Biasing	RS-485 pull-up/pull-down biasing (DIP switch configurable)
Indicators	Transmit, Receive, and IRQ LEDs for each serial port
System Requirements for Software Driver	Microsoft Windows 2000 or Windows XP
Power Requirements	5 VDC @ 600 mA
Operating Temperature	0 °C to 70 °C
Storage Temperature	-30 °C to 85 °C
Humidity	95% relative humidity, non-condensing

Typical Connection Using B3000 Serial Brains



More About Opto 22

Products

Opto 22 develops and manufactures reliable, flexible, easy-to-use hardware and software products for industrial automation, remote monitoring, and data acquisition applications.

SNAP PAC System

Designed to simplify the typically complex process of understanding, selecting, buying, and applying an automation system, the SNAP PAC System consists of four integrated components:

- SNAP PAC controllers
- PAC Project™ Software Suite
- SNAP PAC brains
- SNAP I/O™

SNAP PAC Controllers

Programmable automation controllers (PACs) are multifunctional, multidomain, modular controllers based on open standards and providing an integrated development environment.

Opto 22 has been manufacturing PACs for many years. The latest models include the standalone SNAP PAC S-series and the rack-mounted SNAP PAC R-series. Both handle a wide range of digital, analog, and serial functions and are equally suited to data collection, remote monitoring, process control, and discrete and hybrid manufacturing.

SNAP PACs are based on open Ethernet and Internet Protocol (IP) standards, so you can build or extend a system without the expense and limitations of proprietary networks and protocols.

PAC Project Software Suite

Opto 22's PAC Project Software Suite provides full-featured and cost-effective control programming, HMI (human machine interface) development and runtime, OPC server, and database connectivity software to power your SNAP PAC System.

These fully integrated software applications share a single tagname database, so the data points you configure in PAC Control™ are immediately available for use in PAC Display™, OptoOPCServer™, and OptoDataLink™. Commands are in plain English; variables and I/O point names are fully descriptive.

PAC Project Basic offers control and HMI tools and is free for download on our website, www.opto22.com. PAC Project Professional, available for separate purchase, adds OptoOPCServer, OptoDataLink, options for Ethernet link redundancy or segmented networking, and support for legacy Opto 22 serial *mistic*™ I/O units.

SNAP PAC Brains

While SNAP PAC controllers provide central control and data distribution, SNAP PAC brains provide distributed intelligence for I/O processing and communications. Brains offer analog, digital, and serial functions, including thermocouple linearization; PID loop control; and optional high-speed digital counting (up to 20 kHz), quadrature counting, TPO, and pulse generation and measurement.

SNAP I/O

I/O provides the local connection to sensors and equipment. Opto 22 SNAP I/O offers 1 to 32 points of reliable I/O per module, depending on the type of module and your needs. Analog, digital, serial, and special-purpose modules are all mixed on the same mounting rack and controlled by the same processor (SNAP PAC brain or rack-mounted controller).

Quality

Founded in 1974 and with over 85 million devices sold, Opto 22 has established a worldwide reputation for high-quality products. All are made in the U.S.A. at our manufacturing facility in Temecula, California. Because we do no statistical testing and each part is tested twice before leaving our factory, we can guarantee most solid-state relays and optically isolated I/O modules for life.

Free Product Support

Opto 22's Product Support Group offers free, comprehensive technical support for Opto 22 products. Our staff of support engineers represents decades of training and experience. Product support is available in English and Spanish, by phone or email, Monday through Friday, 7 a.m. to 5 p.m. PST.

Free Customer Training

Hands-on training classes for the SNAP PAC System are offered at our headquarters in Temecula, California. Each student has his or her own learning station; classes are limited to nine students. Registration for the free training class is on a first-come, first-served basis. See our website, www.opto22.com, for more information or email training@opto22.com.

Purchasing Opto 22 Products

Opto 22 products are sold directly and through a worldwide network of distributors, partners, and system integrators. For more information, contact Opto 22 headquarters at 800-321-6786 or 951-695-3000, or visit our website at www.opto22.com.

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