

**INTERFACES  
TRADITIONAL  
STAND ALONE ADAPTER CARDS****Features**

- > RS-422/485 balanced line drivers
- > Operates with up to 5,000 feet of RS422/485 cable
- > Optical isolation between RS-232 and RS-422/485 lines
- > Visual LED indicators for transmit, receive, RTS, CTS, and power
- > Transmission speeds up to 115,200 bits per second.

NOTE: Only "REV L" boards and above (AC7A) and "Rev C" boards and above (AC7B), can be used up to 115,200 baud. Earlier revision boards will operate up to 38,400 baud only.

**DESCRIPTION**

The AC7A/B is a stand-alone adapter card that converts RS-232 serial communication to RS-422/485 serial communication, which is directly compatible with the Optomux family of intelligent brain boards.

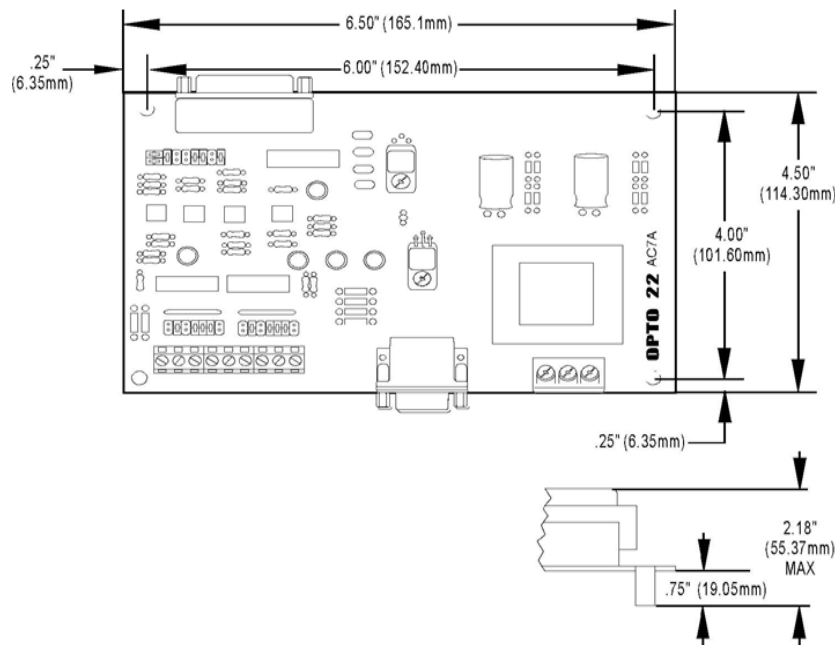
**AC7A****Part Numbers**

<b>Part</b>	<b>Description</b>
AC7A	RS232-RS422/485 Converter 120V
AC7B	RS232-RS422/485 Converter 220V

## FSPECIFICATIONS

Features	AC7A	AC7B
Power Requirements	115 VAC ± 10 VAC @ 50-60 Hz	220 VAC ± 20 VAC @ 50-60 Hz
Power Consumption	0.1 amps @ 115 VAC 5 watts (dissipation)	
Operating Temperature Range	0° C to 70° C 0 to 95% Humidity (non-condensing)	
Optical Isolation	4,000 V between RS-232 and RS-422/485	
RS-232 Interface	25-pin, DB-25 female connector	
RS-422/485 Interface	Screw terminals or 9-pin, DB-9 female connector	
Baud Rate	Up to 38,400 baud; 115.2KBd in Rev. L (AC7A) and later and in Rev. C (AC7B) and later.	
RS-232 Distance	Up to 50 feet	
RS-422/485 Distance	Up to 5,000 feet at 38,400 baud (3,000 feet at 115,200 baud)	
Communications	RS-422/485 full duplex over two twisted pairs and a ground. Additional twisted pairs for RTS and CTS. Also supports RS-485 2-wire mode. This requires user to build a custom RS-232 cable.	
Indicators	Transmit, receive, RTS, CTS, and power	
Agency Approvals	CE; RoHS; UKCA	

## Dimensions



## PRODUCTS

Opto 22 develops and manufactures reliable, easy-to-use, open standards-based hardware and software products. Industrial automation, process control, building automation, industrial refrigeration, remote monitoring, data acquisition, and industrial internet of things (IIoT) applications worldwide all rely on Opto 22.

### groov EPIC® System

Opto 22's *groov Edge Programmable Industrial Controller (EPIC) system* gives you an industrially hardened system with guaranteed-for-life I/O, a flexible Linux®-based processor with gateway functions, and software for your automation and IIoT applications.

#### groov EPIC I/O

*groov I/O* connects locally to sensors and equipment with up to 24 channels on each I/O module. Modules have a spring-clamp terminal strip, integrated wireway, swing-away cover, and LEDs indicating module health and discrete channel status.

*groov I/O* is hot swappable, UL Hazardous Locations approved, and ATEX compliant.

#### groov EPIC Processor

The heart of the system is the *groov EPIC* processor. It handles a wide range of digital, analog, and serial functions for data collection, remote monitoring, process control, and discrete and hybrid manufacturing.

In addition, the EPIC provides secure data communications among physical assets, control systems, software applications, and online services, both on premises and in the cloud.

Configuring and troubleshooting I/O and networking is easier with the EPIC's integrated high-resolution color touchscreen. Authorized users can manage the system locally on the touchscreen or on a monitor connected via the HDMI or USB ports.

#### groov EPIC Software

Software included in the *groov EPIC* processor:

- PAC Control engine to run PAC Control and PAC Display
- CODESYS Runtime engine to run IEC61131-3 compliant programs built with CODESYS Development System
- Optional access to the Linux operating system through a secure shell (SSH) to download and run custom applications
- *groov View* for building your own device-independent HMI, viewable on the touchscreen, PCs, and mobile devices
- Node-RED for creating simple logic flows from pre-built nodes
- Ignition Edge® from Inductive Automation®, with OPC-UA drivers to Allen-Bradley®, Siemens®, and other control systems, and MQTT communications with Sparkplug for efficient IIoT data transfer

### groov RIO®

*groov RIO* revolutionizes remote I/O by offering a single, compact, PoE-powered industrial package with web-based configuration, commissioning, and flow logic software built in, plus support for multiple OT and IT protocols.

Standing alone, it meets the needs of small, variable I/O count applications, especially those that require data logging or data communications, commonly found in IIoT applications. *groov RIO* can also be used with a Modbus/TCP master or as remote I/O for a *groov EPIC* system.

### Older products

From solid state relays (our first products) to world-famous G4 and SNAP I/O, to SNAP PAC controllers, older Opto 22 products are still supported and still doing the job at thousands of installations worldwide. You can count on us to give you the reliability and service you expect, now and in the future.



## QUALITY

Founded in 1974, 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 test each product twice before it leaves our factory rather than testing a sample of each batch, we can afford to guarantee most solid-state relays and optically isolated I/O modules for life.

## FREE PRODUCT SUPPORT

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

Support is always available on our website, including [free online training](#) at OptoU, how-to [videos](#), [user's guides](#), the Opto 22 KnowledgeBase, troubleshooting tips, and [OptoForums](#). In addition, instructor-led, hands-on [Premium Factory Training](#) is available at our Temecula, California headquarters, and you can [register online](#).

## 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** (toll-free in the U.S. and Canada) or **+1-951-695-3000**, or visit our website at [www.opto22.com](http://www.opto22.com).