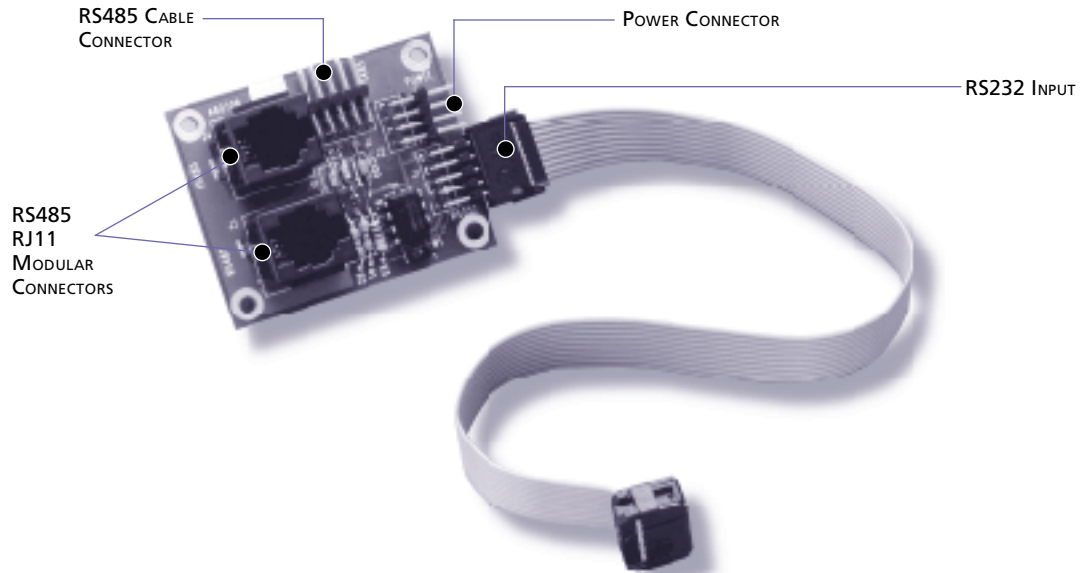


EXP-485

RS485 Adapter • *RS485 interface option for all Ampro serial ports*



The RS485 Adapter offers a low cost, easy-to-use communications and networking interface that is ideally suited to a wide variety of embedded applications requiring low speed data transfer between two or more CPUs.

Many interconnection possibilities exist, including both simple two-system and complex multidrop configurations. RS485 can be used instead of more expensive Ethernet or Arcnet LANs, when data throughput requirements are modest. Some capabilities supported by readily available RS485 software include disk drive and printer sharing, sending data and messages between systems, synchronization of real-time clocks, and "bridging" with other LANs, including Ethernet, Arcnet, and other RS485 based topologies.

Physically, the RS485 Adapter consists of a short (10 in.) RS232 interface cable, plus a tiny (2.1 x 1.7 in.) board that contains the circuitry required to convert between the RS232 and RS485

signal levels. Connection to the RS232 serial port of any Ampro CoreModule™ CPU, Little Board™ CPU, or MiniModule™ expansion product is direct, using the included RS232 interface cable. The adapter may be mounted easily using four spacers.

The RS485 "bus" can interface with up to 4,000 feet of twisted pair cable, used as a half-duplex bidirectional data bus. Data direction is controlled by the RS232 serial port's RTS signal. Connection to the RS485 "bus" is via one or more of the adapter's three interface connectors, which are wired in parallel with each other. Two four-pin RJ11 modular connectors facilitate the use of standard and inexpensive cables and accessories. The RJ11 connectors provide redundant data connections, for maximum data integrity. A third RS485 interface connector (a 10-pin dual row header) is provided as a convenience for systems where RJ11-type connections are not desired.

EXP-485

SPECIFICATIONS

GENERAL

RS232 "HOST" INTERFACE

- Serial port compatibility: usable with all Ampro RS232 serial ports
- Maximum data rate: same as that of the associated RS232 serial port
- RS232 port signal utilization:
 - TxD and RxD connect to half-duplex bidirectional data
 - RTS controls data direction (high = send)
 - RxD monitors RS485 line status during send mode
- RS232 port interface cable specifications:
 - Typical cable length (included): 10 in. (254 mm)
 - Maximum recommended cable length: 3 ft. (915 mm)

RS485 "BUS" INTERFACE

- Transmission protocol: half-duplex bidirectional communication over a single 2-wire pair
- Interface connectors (all wired in parallel):
 - Two RJ11 connectors
 - One 10-pin header connector
- Cabling specifications:
 - Usable with most twisted pair cable
 - Recommended cable impedance: 100 ohms
 - Maximum cable length per "bus": 4,000 ft. (1.2 KM)
 - Maximum number of nodes per "bus": 50
 - Integral terminator: 100 ohm resistor, jumper enabled

MECHANICAL

SIZE POWER

- 2.1 in. x 1.7 in. x 0.8 in. (54 mm x 43 mm x 21 mm)
- Requirements (typical with two 100 ohm terminators):
 - Receive mode: 25 mA at 5 VDC $\pm 5\%$
 - Transmit mode: 85 mA at 5 VDC $\pm 5\%$

ENVIRONMENTAL

- 0° to 70° C standard temperature
- -40° to +85° C extended operating temperature (available by special order)
- 5% to 95% relative humidity, non-condensing
- Storage temperature: -55° to +85° C
- Weight (adapter, only): 0.6 oz. (17 gm)

NOTE: Contact Ampro regarding custom configurations and special order options.

For ordering information and pricing please refer to Ampro Ordering Guide.



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