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Find the *National Instruments GPIB-RS232* at our website: *Click HERE*

GPIB Serial Port Controller/Converter

NI GPIB-RS232

- RoHS-compliant
- Completely IEEE 488.2-compatible
- Maximum data transfer rates (baud rates) of 115.2 kb/s; hardware handshaking and XON/XOFF protocols prevent data loss
- Extends GPIB to cable lengths up to 15.6 m (50 ft)
- External 12 VDC universal power supply (100 to 240 VAC input)
- Host configuration utility to configure mode of operation (software-selectable modes for compatibility with existing GPIB-232CT-A and GPIB-232CV-A)
- 4 modes of operation
  - S Mode – control GPIB-based instruments from your PC using RS232
  - G Mode – integrate an RS232 instrument into your GPIB system; change serial parameters in software
  - C Mode – control a single GPIB instrument through your RS232 port (simple protocol translation)
  - D Mode – interface an RS232 instrument to a GPIB bus; configure serial parameters up front
- Optional rack-mount and DIN-rail hardware kits



Overview

The National Instruments GPIB-RS232 is a high-performance serial-to-GPIB interface. With it connected, a computer with an RS232 serial port can be a talker, listener, or controller on the GPIB bus. The NI GPIB-RS232 can also interface RS232 instruments and peripherals to the GPIB.

The GPIB-RS232 has all the software and logic required to implement the physical and electrical specifications of the IEEE 488 and RS232 standards. It can interpret and execute high-level commands sent to it over the serial port, performing RS232-to-GPIB protocol conversions, as well as interpret commands sent over GPIB, performing GPIB-to-RS232 protocol conversions. The GPIB-RS232 uses the TNT5004 controller chip, implementing all IEEE 488 talker/listener/controller functionality.

Two protection mechanisms ensure that the GPIB-RS232 does not lose incoming serial data – data buffering and handshaking. The GPIB-RS232 has an internal RAM buffer that stores incoming serial data until it can output the data to the GPIB port. The serial RAM buffer size is 1 MB. When the serial RAM buffer is nearly full, the GPIB-RS232 can handshake with the serial host to stop data transmission. When more space is available in the buffer, the GPIB-RS232 can again handshake with the serial host to start data transmission. The GPIB-RS232 can use both the XON/XOFF software handshaking and the hardware handshaking protocols.

Modes of Operation

The GPIB-RS232 has four software-selectable modes of operation, ensuring compatibility with existing applications:

S Mode

Configure the GPIB-RS232 to operate in S Mode if your serial device acts as a controller in the GPIB system, addressing one or more devices, and performing other GPIB controller functions.

G Mode

Configure the GPIB-RS232 to operate in G Mode if your serial device acts only as a talker and/or listener while a GPIB controller manages the system, sending and receiving data to and from the serial device.

D Mode

Set the GPIB-RS232 to operate in D Mode to connect a serial device to a GPIB system with a GPIB controller responsible for addressing the GPIB-RS232 to talk or listen.

C Mode

Set the GPIB-RS232 to operate in C Mode when transferring data between a single GPIB device with no controller capabilities and a serial device.

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Specifications

IEEE 488 Compatibility

IEEE 488.1 and IEEE 488.2 compatible

Data Transfer Rate

RS232 ..... Up to 115.2 kb/s

Physical

Dimensions..... 16.01 by 9.35 by 3.15 cm (6.30 by 3.68 by 1.24 in.)

Weight..... 192 g (6.75 oz)

Connectors

GPIB ..... IEEE 488 24-pin

RS232 ..... DB-9 male

DC power ..... Coaxial plug (single output models) 5.5 mm outer diameter, 2.1 mm inner diameter, 11 mm length, center "+"

Power Requirements

Input voltage range..... 9 to 28 VDC

Current consumption (@12 VDC)..... 800 mA max, 300 mA typical

Internally fused (nonreplaceable)..... F 2.2 A 125 V (fast-acting)

12 VDC power supply (included)

Input voltage/current range ..... 100 to 240 VAC, 0.4 A, 47 to 63 Hz

Operating Environment

Ambient temperature..... 0 to 55 °C

(Note: For the GPIB-RS232 to operate over the entire specified ambient temperature range, stacking the product is not recommended.)

Relative humidity ..... 10 to 90%, noncondensing

Maximum altitude..... 2,000 m (at 25 °C ambient temperature)

Pollution degree..... 2

Indoor use only (in accordance with IEC-60068-2-1, IEC-60068-2-2, and IEC-60068-2-56).

Storage Environment

Ambient temperature..... -20 to 70 °C

Relative humidity ..... 5 to 95%, noncondensing

(in accordance with IEC-60068-2-1, IEC-60068-2-2, and IEC-60068-2-56)

Shock and Vibration

Operational shock ..... 30 g peak, half-sine, 11 ms pulse

(in accordance with IEC-60068-2-27; test profile developed in accordance with MIL-PRF-28800F)

Random Vibration

Operating..... 5 to 500 Hz, 0.3 g_{rms}

Nonoperating ..... 5 to 500 Hz, 2.4 g_{rms}

(in accordance with IEC-60068-2-64; test profile developed in accordance with MIL-PRF-28800F, Class 3)

Compliance and Safety

Online at **ni.com/certification**

Ordering Information

NI GPIB-RS232

U.S. 120 VAC 779732-01

Universal Euro 240 VAC 779732-04

North American 240 VAC 779732-05

United Kingdom 240 VAC.....779732-06

Japanese 100 VAC 779732-07

BUY NOW!

For complete product specifications, pricing, and accessory information, call 800 813 3693 (U.S.) or go to **ni.com/gpib**.

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NI Factory Installation Services (FIS) is the fastest and easiest way to use your PXI or PXI/SCXI combination systems right out of the box. Trained NI technicians install the software and hardware and configure the system to your specifications. NI extends the standard warranty by one year on hardware components (controllers, chassis, modules) purchased with FIS. To use FIS, simply configure your system online with **ni.com/pxiadvisor**.

Calibration Services

NI recognizes the need to maintain properly calibrated devices for high-accuracy measurements. We provide manual calibration procedures, services to recalibrate your products, and automated calibration software specifically designed for use by metrology laboratories. Visit **ni.com/calibration**.

Repair and Extended Warranty

NI provides complete repair services for our products. Express repair and advance replacement services are also available. We offer extended warranties to help you meet project life-cycle requirements. Visit **ni.com/services**.

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