

GPIB Universal Serial Bus (USB) Controller

NI GPIB-USB-B

- TNT4882 ASIC
 - Completely IEEE 488.2 compatible
 - Talker/Listener/Controller
- Controls up to 14 GPIB instruments
- Compact size and light weight
- No DIP switches – Plug and Play configuration
- Full-speed USB 1.1 signaling 12 Mb/s
- More than 880 kbytes/s transfer rate
- No external power required
- Built-in 2 m USB cable
- No GPIB cable required to connect to instruments
- Compatible with USB 2.0

Operating Systems

- Windows 2000/XP/Me/98

Recommended Software

- LabVIEW
- LabWindows/CVI
- Measurement Studio

Driver Software (included)

- NI-488.2



Overview

The compact National Instruments GPIB-USB-B transforms any computer with a USB port into a full-function, IEEE 488.2 controller that can control up to 14 programmable GPIB instruments. The small size and light weight of the NI GPIB-USB-B make it ideal for portable applications using a laptop computer or other applications in which the computer has no available internal I/O slots. The GPIB-USB-B works with Windows 2000/XP/Me/98 computers with a USB port.

The GPIB-USB-B is easy to install and use because there are no external DIP switches and you do not need to restart your computer for the system to recognize your IEEE 488.2 interface. The GPIB-USB-B is a Plug and Play interface that the operating system automatically recognizes and configures as soon as you physically attach it to the USB port on your computer. With the GPIB-USB-B, you can get up and running quickly, so you can focus on developing your instrument control applications.

Using the TNT4882C Talker/Listener/Controller IEEE 488.2 ASIC, the GPIB-USB-B implements the full range of GPIB controller functions, including those required and recommended by IEEE 488.2. It also implements normal and extended talker and listener, serial and parallel polling, service requests, and pass/receive control functions. Drawing power directly from the USB port, the GPIB-USB-B requires no external power input.

With NI-488.2, you get a robust driver with additional utilities and wizards that help you troubleshoot your applications and decrease your development time (see Figure 2). Furthermore, you

maintain compatibility with existing systems. Applications previously written for other National Instruments GPIB controllers can run unmodified with the GPIB-USB-B.

Connecting the GPIB-USB-B to Your Instruments

The GPIB-USB-B does not require a GPIB cable for connecting to your instruments. You can attach it directly to the GPIB port on your instrument and then connect the USB cable to the USB port on your computer. If you have multiple instruments in a daisy chain or star configuration, attach any cables that connect to the other instruments first, and then piggyback the GPIB-USB-B as the last connector in the stack.

INFO CODES

For more information, or to order products online visit ni.com/info and enter:

gpiusbbs

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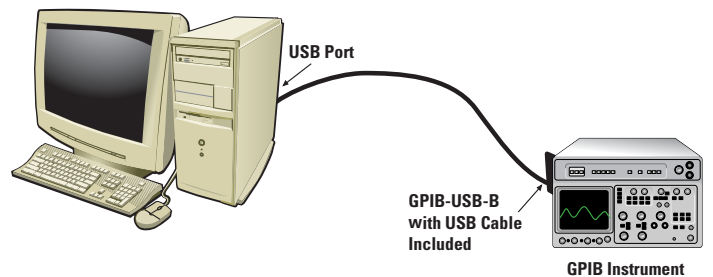
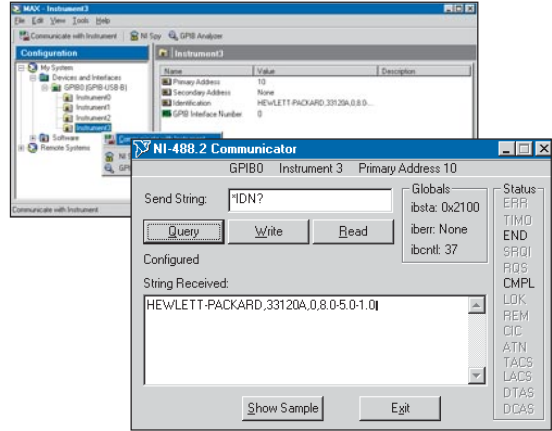
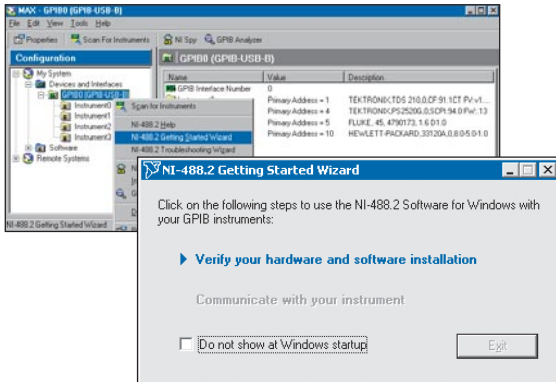


Figure 1. Easily connect your GPIB instruments to the USB port of your computer.

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(a) Run the Getting Started Wizard.

(b) Communicate with your instrument.

Figure 2. Take these easy steps to get up and running with your instrument communication.

Ordering Information
 GPIB-USB-B and NI-488.2
 Windows 2000/XP/Me/98778416-01
 Includes built-in 2 m USB cable.

Specifications

USB Port			
Full-speed USB signaling	12 Mb/s		
IEEE 488 Compatibility			
Compatible with IEEE 488.1 and IEEE 488.2			
IEEE Bus Transfer Rates			
Transfer rates	more than 880 kbytes/s		
External Indicators			
USB configured, USB active			
Power Requirement			
USB self-powered device			
Maximum power consumption.....	200 mA		
Physical			
Dimensions	10.7 by 6.6 by 2.6 cm (4.2 by 2.6 by 1.0 in.)		
I/O Connectors			
GPIB	IEEE 488 standard 24 pin		
USB	USB standard series B plug		
Operating Environment			
Temperature.....	0 to 55 °C		
Relative humidity	10 to 90 %, noncondensing		
Storage Environment			
Temperature.....	-20 to 70 °C		
Relative humidity	10 to 90 %, noncondensing		