

GPIB-USB CONTROLLER

Frequently Asked Questions

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How is Prologix GPIB-USB controller different from other vendors'?

- While Prologix GPIB-USB controller provides many of the same features as GPIB-USB controllers from other vendors, it is much easier to use. Prologix GPIB-USB controller provides a virtual serial interface to communicate with instruments, while handling all GPIB protocol details for you. As a result, you can easily communicate with your instruments using a simple terminal program instead of having to write custom programs using a vendor supplied GPIB library. Please see the [Manual](#) for a complete list of features.

Is Prologix GPIB-USB controller compatible with NI LabVIEW, Agilent VEE, and other test frameworks?

- Yes. Prologix GPIB-USB controller provides a virtual serial interface to communicate with instruments, while handling all GPIB protocol details for you. Any test framework, or programming environment, that provides access to serial ports is compatible with Prologix GPIB-USB controller. For example, you may use NI LabVIEW Serial VIs or NI VISA VIs to communicate with the controller through the virtual serial port. Another option is to use the FTDI D2XX drivers. FTDI has [sample](#) LabVIEW VIs for communicating with the controller using D2XX drivers.

Will my NI LabVIEW, or Agilent VEE, programs work unmodified with Prologix GPIB-USB controller?

- Probably not. Prologix GPIB-USB controller provides a virtual serial interface to communicate with instruments, while handling all GPIB protocol details for you. Programs that expect a GPIB interface (such as NI 488.2 interface) must be modified to use the serial interface to work with Prologix GPIB-USB controller.

Can Prologix GPIB-USB controller talk to multiple instruments?

- Yes. You specify the GPIB address of the instrument to address using the "+ +addr" command. All subsequent device commands are sent to the specified address. When you want to address a different instrument, issue another "+ +addr" command with the new address.

How do I download screen plots from instruments?

- There are two ways of doing this — device initiated plots and host requested plots:

Device Initiated Plot

1. Set the device to Talk Only mode
2. Set the GPIB-USB controller to DEVICE Mode (DIP Switch #6 is OFF)
3. Set DIP switches #1-#5 to the GPIB address of the plotter as required by the device
4. Connect the controller to the device and to the USB port on the PC
5. Open the virtual COM port using a terminal program like HyperTerminal, or using plotter software
6. Initiate screen plot download from device front panel

Host Requested Plot

1. Set the device to Talk/Listen (or Addressable) mode
2. Set the GPIB-USB controller to CONTROLLER Mode (DIP Switch #6 is ON)
3. Set DIP switches #1-#5 to the GPIB address of the device
4. Connect the controller to the device and to the USB port on the PC
5. Open the virtual COM port with using a terminal program like Windows HyperTerminal, or plotter software
6. Using the terminal program, or plotter software, issue the device command to download screen plot

How do I print screen plots downloaded from instruments?

- To graphically render plots you have to use a plotter emulation application such as:
 - [7470.exe](#) — an excellent open source application.
 - [PrintCapture](#) — a full-featured commercial application. 30-day free trial version available.
 - [Plottergeist](#) — another full-featured commercial application.

Are drivers available for my OS?

- Drivers are available for the following OS from FTDI [website](#):
 - Windows XP x64
 - Windows XP
 - Windows Server 2003
 - Windows 2000
 - Windows ME
 - Windows 98
 - Linux
 - Mac OS X

- Mac OS 9
- Mac OS 8
- Windows CE.NET (Version 4.2 and greater)

Which drivers do I install?

- Installing the Virtual COM Port (VCP) drivers allows you to communicate with the controller using any terminal program. If you install the D2XX drivers you have to write a custom program to talk to the controller. However, the D2XX drivers are faster.

Can I use FTDI D2XX drivers?

Yes. However, you have to write a custom program to talk to the controller. The FTDI D2XX drivers are faster, though.

How do I install the drivers?

Please refer to FTDI [installation guides](#).

What accessories are needed to use the GPIB-USB controller?

At a minimum you need an USB A-B cable. You may also need a GPIB cable.

Do I need a power supply?

No, the GPIB-USB controller is powered by the USB bus.

Do I need a GPIB cable?

You may plug the GPIB-USB controller directly onto the GPIB connector on the instrument. The controller has a male GPIB connector and most instruments have a female GPIB connector. However, if it is not convenient to do so, you can use a GPIB cable to connect the controller.

Which USB cable should I use?

You need a USB A-B cable, with an USB A connector at one end, and an USB-B connector at the other end.

What software do I need to use the GPIB-USB controller?

You may use any terminal program such as Windows HyperTerminal or Tera Term Pro to communicate with the GPIB-USB controller. In additional programs like 7470.exe can talk directly to the controller.

How do I use the controller with HyperTerminal?

Enable CONTROLLER mode (DIP switch #6 is ON). Connect SB cable. Start HyperTerminal.

In "File" | "Properties" dialog, select the virtual COM port created by USB driver, then click "Configure...", and set values as follows:

- Bits per second: 115200
- Data bits: 8
- Parity: None
- Stop bits: 1
- Flow control: Hardware

Click "OK", then select the "Settings" tab and click "ASCII setup...". In the dialog, check "Send line ends with line feeds" and "Echo typed characters locally". Click "OK" twice.

You are now ready to communicate with the controller. Type ++ver and hit ENTER in the HyperTerminal window to verify the settings are correct.

How do I use the controller with Tera Term Pro?

Enable CONTROLLER mode (DIP switch #6 is ON). Connect USB cable. Start Tera Term Pro.

In "Setup" | "Serial Port..." dialog, set values as follows:

- Port: **Select virtual COM port created by USB driver**
- Baud rate: 115200
- Data: 8 bit
- Parity: none
- Stop: 1 bit
- Flow control: Hardware

Click OK. In the "Setup" | "Terminal" dialog, set "Transmit" to "CR+LF", and check "Local echo". Click OK.

You are now ready to communicate with the controller. Type ++ver and hit ENTER in the HyperTerminal window to verify the settings are correct.

How do I use the controller with 7470.exe?

Please see 7470.exe [User Guide](#).

How do I use the controller with PrintCapture?

Enable DEVICE mode (DIP switch #6 is OFF). Connect USB cable. Start PrintCapture.

Open "Setup" | "Configuration..." dialog. Select "Serial Port" tab. Set values as follows:

- Port: **Select virtual COM port created by USB driver**
- Baud Rate: 115200
- Word Size: 8
- Parity: NONE
- Stopbits: 1
- Handshake: RTS/CTS
- Select "Automatic"

Click OK. PrintCapture is now ready to receive data.

Some instruments, like HP 8566B, require PrintCapture to respond to commands sent by the instrument. In such cases, enable output command processing in PrintCapture as follows:

- Open "Setup" | "Configuration..." dialog.
- Select "HPGL Processing" tab.
- Check "Process Output Commands" in lower right corner. Click OK.

Please see PrintCapture [website](#) for more details.

How do I use the controller with Plottergeist?

Enable DEVICE mode (DIP switch #6 is OFF). Connect USB cable. Start Plottergeist.

Open "Configuration" | "GPIB/RS-232..." dialog. Select "Connect using Serial Port", and click "Setup". Set values as follows:

- Baud Rate: 115200
- Handshaking Method: RTS/CTS
- Data Bits: 8
- Stop Bits: 1
- Parity: NONE

- Port: ***Select virtual COM port created by USB driver***

Click OK twice. Click "On Line" on the tool bar. Plottergeist is now ready to receive data.

Which commands do I use to talk to my instrument?

Refer to the programming manual of your instrument for commands accepted by the instrument.

Are code samples available?

Yes. See [here](#).

Why are the TALK and LISTEN LEDs on the controller flashing?

Flashing TALK and LISTEN LEDs indicate the PC serial port is not configured correctly. Make sure the port is set to 115,200 baud, 8 data bits, no parity, 1 stop bit, and hardware (RTS/CTS) flow control. Also, configure your terminal program to send Line Feed with Carriage Return character.

Why am I not getting any response from the instrument?

This could be due to any of the following reasons:

- Serial port was not configured correctly
- Instrument address was not set correctly in the GPIB-USB controller
- Instrument was not configured for output
- The command was not recognized by the instrument

What if I have a question that is not answered here?

Please send an email with your question to support@prologix.biz. Please describe in detail your problem, your setup, and any troubleshooting you have done.

Where is the user manual?

[User Manual](#)
