

ARTISAN®
TECHNOLOGY GROUP

Your **definitive** source for quality pre-owned equipment.

Artisan Technology Group
(217) 352-9330 | sales@artisantg.com | artisantg.com

Full-service, independent repair center
with experienced engineers and technicians on staff.

We buy your excess, underutilized, and idle equipment
along with credit for buybacks and trade-ins.

Custom engineering
so your equipment works exactly as you specify.

- Critical and expedited services
- In stock / Ready-to-ship
- Leasing / Rentals / Demos
- ITAR-certified secure asset solutions

Expert team | Trust guarantee | 100% satisfaction

All trademarks, brand names, and brands appearing herein are the property of their respective owners.

Visit our website - *Click HERE*

INSTALLATION GUIDE
NI PXI-8232

This document explains how to install the Ethernet and NI-488.2 drivers for your NI PXI-8232 (part number 189140*x*-02L, where *x* is D or higher).

The Ethernet port on the NI PXI-8232 is based on the Intel 82541PI-compatible Ethernet controller.

Installing Your PXI Board

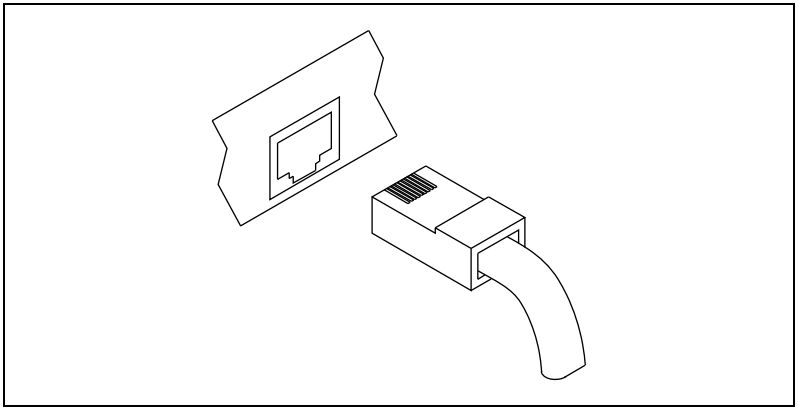
Complete the following steps to install the PXI-8232 hardware:

1. Shut down Windows, if it is running, by selecting **Start»Shut Down**.
2. Power off your PXI or CompactPCI chassis. Keep the chassis plugged in so it remains grounded as you install the adapter.
3. Remove the filler panel from a PXI peripheral bus master slot. The adapter requires a bus master slot to take advantage of the onboard DMA and Ethernet controllers. All PXI chassis and most CompactPCI chassis contain only bus master slots. Refer to your chassis documentation to verify you are using a bus master slot.
4. Touch a metal part on your chassis to discharge any static electricity that might be on your clothes or body.
5. Insert the adapter into the selected bus master slot. Use the injector/ejector handle to fully inject the device into place.
6. Screw the adapter front panel to the PXI or CompactPCI chassis front panel mounting rail.

NATIONAL INSTRUMENTS™

Connect the Network Cable

Connect a network cable to the adapter, as shown in the following figure.



- For 1000BaseT (gigabit over copper), use Category 5 (must be 4-pair wiring). Be sure to use Category 5 cable that complies with the TIA-568 wiring specification. For more information on this specification, refer to the Telecommunications Industry Association Web site, `www.tiaonline.org`.
- For 100BaseTX, use Category 5 wiring or better.

Caution If using less than 4-pair cabling, you *must* manually configure the adapter and link partner speed and duplex setting. In addition, with 2- and 3-pair cabling, the adapter can achieve speeds of up to only 100 MB/s.

- For 10BaseT, use Category 3 wiring or better.
- To use this adapter in a residential environment (at any speed), use Category 5 wiring. If the cable runs between rooms or through walls and/or ceilings, it should be plenum rated for fire safety.
- The cable length is limited to 100 m.
- The adapter must be connected to a compatible link partner, preferably set to auto-negotiate speed and duplex.
- The PXI-8232 automatically accommodates either MDI or MDI-X connections. You can use the auto-MDI-X feature to connect two adapters directly without using a crossover cable.

Install the Drivers

Follow the installation instructions for your operating system. The adapter works with the following operating systems:

- Windows XP and later
- LabVIEW Real-Time 2010 or higher

Windows XP and later

Complete the following steps to install the driver software for Windows XP and later:

1. Insert the NI-488.2 media. The autorun launches to start the installation process.



Tip The **View Documentation** link on the autorun screen provides access to NI-488.2 documentation, including detailed hardware installation instructions.

2. When you have completed the software installation, restart the computer.
3. Install the Windows XP and later Ethernet drivers.



Note The NI-488.2 Hardware Installation utility may run at this time. Finish the Ethernet installation described below before using the utility.

(Windows Vista and later) Windows automatically detects the new hardware and installs the Ethernet driver.

(Windows XP and Server 2003) Cancel the Found New Hardware Wizard and insert the *PCI/PXI Gigabit Ethernet Adapters* media. From the media, launch the appropriate executable: `PROWin32.exe` for 32-bit systems or `PROWinx64.exe` for 64-bit systems. Follow the instructions to install the driver for your Ethernet port.

4. Use the NI-488.2 Hardware Installation utility.

LabVIEW Real-Time

LabVIEW Real-Time includes drivers for the Ethernet port on your PXI-8232 board; no additional software is needed.

The GPIB interface requires additional software. Complete the following steps to install the NI-488.2 software:

1. On the Windows host, insert the NI-488.2 media. The autorun launches to start the installation process.
2. In the installation feature tree, ensure that the NI-488.2 for LabVIEW Real-Time feature is selected to install.

3. When you complete the software installation, restart the computer if prompted.
4. In Measurement & Automation Explorer, deploy the software to your target. Make sure that NI-488.2 is selected to be installed to your target.

Troubleshooting

Adapter Cannot Connect to the Network

- Make sure the cable is installed properly.

  The network cable must be installed properly at both the adapter and hub. The maximum cable distance is 100 m. If the cable is connected properly and within the allowed distance, try another cable.
- Check the LEDs on the adapter.

  The adapter has two LEDs on the RJ-45 connector. The following table lists the function of each LED.

LED Color	Function	Indication	Meaning
Green	Action/Link	On	The adapter is receiving power. The cable connection is good.
		Off	The adapter is not sending or receiving network data. The adapter is not receiving power. The cable connection is bad or you have a driver problem.
		Flashing	The adapter is sending and receiving network data.
Yellow/Green	Speed	Yellow	The adapter is operating at 1000 Mb/s.
		Green	The adapter is operating at 100 Mb/s.
		Off	The adapter is operating at 10 Mb/s.

- Verify that you are using the drivers that came with the adapter.

Computer Hangs When Drivers Are Loaded

- Change the PCI BIOS interrupt settings. Refer to the *PXI Installation Tips* section for more information.

Link LED Does Not Light

- Make sure the network drivers are loaded by checking the **Driver** tab of the adapter's Device Manager properties.
- Check the cable connection.

ACT LED Does Not Light

- Make sure the correct network drivers are loaded by checking the **Driver** tab of the adapter's Device Manager properties.
- The network may be idle.

Adapter Has Stopped Working

- Reseat the adapter in the PXI slot or try a different slot.
- The network drivers may be corrupt or missing. Remove and reinstall the drivers.
- Reboot the computer.
- Use another cable.
- Use a different adapter.

Link LED Is Not Lit When Computer Is Shut Down and Power Is Connected

- Make sure the network cable is attached.

PXI Installation Tips

PXI computers are designed to configure add-in boards automatically each time the computer starts. The PXI computer sets the I/O address and IRQ level for the peripheral boards when the computer starts. The network drivers cannot change these values. If you experience problems when the computer starts, you may need to follow additional steps.

On some computers, manual configuration is possible through the computer's BIOS setup utility. Refer to the documentation for your computer. You may need to verify or change some BIOS settings.

The following common solutions may correct your problem:

- Make sure you have installed the adapter in a bus master-enabled slot. On some computers, not all slots are bus master enabled by default. Check your BIOS settings. Enable PXI bus mastering, if your BIOS has such an option.
- Reserve interrupts (IRQ) and/or memory addresses for ISA adapters. This prevents PXI boards from using the same settings ISA boards are using. Try changing some of the interrupts reserved for ISA, but not being used, to reserved for PXI.
- Update your BIOS. Sometimes updating the BIOS corrects some configuration problems.
- Configure the PXI slot for level-triggered interrupts instead of edge-triggered interrupts in BIOS.

Ethernet Adapter Specifications

LEDs

Green .....Activity/Link

Yellow/Green .....Speed

Refer to `ni.com/products` for complete specifications.

LabVIEW, National Instruments, NI, ni.com, the National Instruments corporate logo, and the Eagle logo are trademarks of National Instruments Corporation. Refer to the *Trademark Information* at `ni.com/trademarks` for other National Instruments trademarks. Other product and company names mentioned herein are trademarks or trade names of their respective companies. For patents covering National Instruments products/technology, refer to the appropriate location: **Help»Patents** in your software, the `patents.txt` file on your media, or the *National Instruments Patents Notice* at `ni.com/patents`. Refer to the *Export Compliance Information* at `ni.com/legal/export-compliance` for the National Instruments global trade compliance policy and how to obtain relevant HTS codes, ECCNs, and other import/export data.

© 2003–2013 National Instruments. All rights reserved.

372288D-01 Jan13

Artisan Technology Group is an independent supplier of quality pre-owned equipment

Gold-standard solutions

Extend the life of your critical industrial, commercial, and military systems with our superior service and support.

We buy equipment

Planning to upgrade your current equipment? Have surplus equipment taking up shelf space? We'll give it a new home.

Learn more!

Visit us at **artisantg.com** for more info on price quotes, drivers, technical specifications, manuals, and documentation.

Artisan Scientific Corporation dba Artisan Technology Group is not an affiliate, representative, or authorized distributor for any manufacturer listed herein.

We're here to make your life easier. How can we help you today?

(217) 352-9330 | sales@artisantg.com | artisantg.com

ARTISAN® TECHNOLOGY GROUP