



NI-Serial Troubleshooting Wizard Help

February 2007, 371017D-01

Use this help file to get information about errors reported by the NI-Serial Troubleshooting Wizard.

To navigate this help file, use the **Contents**, **Index**, and **Search** tabs to the left of this window.

For more information about this help file, refer to the following topics:

[Using Help](#)

[Important Information](#)

[Technical Support and Professional Services](#)

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Using Help

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Conventions

This help file uses the following formatting and typographical conventions:

» The » symbol leads you through nested menu items and dialog box options to a final action. The sequence **File»Page Setup»Options** directs you to pull down the **File** menu, select the **Page Setup** item, and select **Options** from the last dialog box.



This icon denotes a note, which alerts you to important information.

bold Bold text denotes items that you must select or click on in the software, such as menu items and dialog box options. Bold text also denotes parameter names, emphasis, or an introduction to a key concept.

green Underlined text in this color denotes a link to a help topic, help file, or Web address.

italic Italic text denotes variables, emphasis, cross references, or an introduction to a key concept. Italic text also denotes text that is a placeholder for a word or value that you must supply.

monospace Text in this font denotes text or characters that you should enter from the keyboard, sections of code, programming examples, and syntax examples. This font is also used for the proper names of disk drives, paths, directories, programs, subprograms, subroutines, device names, functions, operations, variables, filenames and extensions, and code excerpts.

monospace bold Bold text in this font denotes the messages and responses that the computer automatically prints to the screen. This font also emphasizes lines of code that are different from the other examples.

monospace italic Italic text in this font denotes text that is a placeholder for a word or value that you must supply.

Navigating Help (Windows Only)

To navigate this help file, use the **Contents**, **Index**, and **Search** tabs to the left of this window or use the following toolbar buttons located above the tabs:

- **Hide**—Hides the navigation pane from view.
- **Locate**—Locates the currently displayed topic in the **Contents** tab, allowing you to view related topics.
- **Back**—Displays the previously viewed topic.
- **Forward**—Displays the topic you viewed before clicking the **Back** button.
- **Options**—Displays a list of commands and viewing options for the help file.

Searching Help (Windows Only)

Use the **Search** tab to the left of this window to locate content in this help file. If you want to search for words in a certain order, such as "related documentation," add quotation marks around the search words as shown in the example. Searching for terms on the **Search** tab allows you to quickly locate specific information and information in topics that are not included on the **Contents** tab.

Wildcards

You also can search using asterisk (*) or question mark (?) wildcards. Use the asterisk wildcard to return topics that contain a certain string. For example, a search for "prog*" lists topics that contain the words "program," "programmatically," "progress," and so on.

Use the question mark wildcard as a substitute for a single character in a search term. For example, "?ext" lists topics that contain the words "next," "text," and so on.



Note Wildcard searching will not work on Simplified Chinese, Traditional Chinese, Japanese, and Korean systems.

Nested Expressions

Use nested expressions to combine searches to further refine a search. You can use Boolean expressions and wildcards in a nested expression. For example, "example AND (program OR VI)" lists topics that contain "example program" or "example VI." You cannot nest expressions more than five levels.

Boolean Expressions

Click the  button to add Boolean expressions to a search. The following Boolean operators are available:

- **AND** (default)—Returns topics that contain both search terms. You do not need to specify this operator unless you are using nested expressions.
- **OR**—Returns topics that contain either the first or second term.
- **NOT**—Returns topics that contain the first term without the second term.
- **NEAR**—Returns topics that contain both terms within eight words of each other.

Search Options

Use the following checkboxes on the **Search** tab to customize a search:

- **Search previous results**—Narrows the results from a search that returned too many topics. You must remove the checkmark from this checkbox to search all topics.
- **Match similar words**—Broadens a search to return topics that contain words similar to the search terms. For example, a search for "program" lists topics that include the words "programs," "programming," and so on.
- **Search titles only**—Searches only in the titles of topics.

Printing Help File Topics (Windows Only)

Complete the following steps to print an entire book from the **Contents** tab:

1. Right-click the book.
2. Select **Print** from the shortcut menu to display the **Print Topics** dialog box.
3. Select the **Print the selected heading and all subtopics** option.
 **Note** Select **Print the selected topic** if you want to print the single topic you have selected in the **Contents** tab.
4. Click the **OK** button.

Printing PDF Documents

This help file may contain links to PDF documents. To print PDF documents, click the print button located on the Adobe Acrobat Viewer toolbar.

Windows System Information Tool

The Windows System Information tool collects and displays your system configuration information. Use this tool to determine which resources in the system are currently in use. The information provided by this utility is a useful guide for selecting conflict-free resources.

Follow these steps to use it:

1. [Click here to access the System Information tool.](#)
2. Select **Hardware Resources** from the left window pane.
3. Use the IRQs and I/O folders to view in-use resources.
4. When you are finished, click the **x** in the top right corner to exit the System Information utility.

Use System Information to find free resources. For example, if you are experiencing an interrupt resource conflict, view the IRQ resources that are being used and determine which are available. Note an available IRQ resource and then use the Windows Device Manager utility to configure NI-Serial to use that available IRQ resource for the serial interface.

[Click here to access the Windows Device Manager.](#)

Event Viewer

The Event Viewer is used to maintain a system log. If the NI-Serial driver fails to start properly, it records entries in the system log that explain why it failed to start.

Follow these steps to use the Event Viewer:

1. [Click here to access the Event Viewer.](#)
2. From the left window pane, select **System Log** if you are running Windows 2000. For Windows XP, this option is called **System**.
3. Select the **View** menu and make sure **All Records** and **Newest First** are selected.
4. Begin examining the event details from the top of the list. To view event details, double-click on the event.
5. The events of interest are those with the word **niser** in the **Source** column. You are looking for serial-related events that mention a resource conflict. You can ignore all other serial-related events.
6. Note the very first resource conflict encountered. You need to know the type of resource conflict, for example, I/O address or IRQ. You also need to know which board the conflict is for.



Note Be careful not to look past the last event logged since the system started. The event whose **Source** is **EventLog** with a description of **The Event log service was started** is the first event logged when the system starts up.

Ethernet Device Configuration Utility

Use the NI Ethernet Device Configuration utility if you need to manually configure the network parameters of a serial ENET interface. If your network uses DHCP, the network configuration is performed automatically at startup, and you do not need to run this utility unless you want to change the hostname. Consult your network administrator if you do not know whether your network uses DHCP.

[Click here to start the NI Ethernet Device Configuration utility.](#)

Refer to the *Serial Hardware and Software for Windows Help* for information about using the utility to configure the network settings for your serial ENET interface.

[Click here to open the *Serial Hardware and Software for Windows Help*.](#)

Unable to Open Port

NI-Serial was unable to open this port. Possible causes for this problem are listed below:

The port is already open

You must close all open ports to run this test successfully. Close all serial applications and click **Retest** to rerun the NI-Serial Troubleshooting Wizard.

The port is disabled in the Device Manager

All NI Serial ports must be enabled to run this test successfully. Refer to the Device Manager to verify that all ports are enabled.

Device Manager.

[Click here to access the Windows](#)

One or More Missing Serial Interfaces

NI-Serial did not recognize every serial interface. There are several reasons why you might encounter this problem:

The serial interface is not properly installed

Refer to the *Serial Hardware and Software for Windows Help* to verify that your serial interface is correctly installed. Rerun the NI-Serial Troubleshooting Wizard.

Click here to open the *Serial Hardware and Software for Windows Help*.

You ran the Troubleshooting Wizard before the Add New Hardware Wizard completed the task of adding the Plug-and-Play interface to your system.

Follow the steps in the Add New Hardware Wizard to finish adding the hardware to your system before you run the Troubleshooting Wizard. If you canceled the Add New Hardware Wizard before it completed, reboot your system and make sure the Add New Hardware Wizard completes before continuing with the Troubleshooting Wizard.

Non-Plug-and-Play interface

You have a non-Plug-and-Play interface, such as a serial ENET interface, and you did not use the Add Serial ENET Hardware Wizard to add the interface to your system properly. The Add Serial ENET Hardware Wizard guides you through the process of adding serial ENET interfaces to your system.

ENET Hardware Wizard. [Click here to access the Add Serial](#)

Serial USB interface not detected

The USB host controller must be working properly to use the serial interface. Refer to the Device Manager to verify that the host controller is functioning properly. If you select **View devices by type**, you can review the USB Host Controller properties to ensure it is correctly enabled and functioning.

Manager.

[Click here to access the Device](#)

PCMCIA serial interface not detected

The PCMCIA adapter must be working properly to use the serial interface. Refer to the Device Manager to verify that the adapter is functioning properly. If you select **View devices by type**, you can review the PCMCIA adapter properties to ensure it is correctly enabled and functioning.

Manager.

[Click here to access the Device](#)

Serial interface has been removed from the system

You have removed the serial interface from the system. Click on the link below to launch the Device Manager. Right-click on your computer's name in the list and select **Scan for hardware changes**. You may also reboot your computer to allow the operating system to detect and install your serial interface.

Manager.

[Click here to access the Device](#)

Missing IP Address—ENET

The serial ENET interface is not powered on and ready to operate, or the IP address is either unspecified or incorrectly specified. Follow these steps to resolve the problem:

1. Ensure that the serial ENET interface is powered on. The **PWR/RDY** LED should be steady yellow or orange.
2. Go to **Start»Settings»Control Panel»Network and Dial-up Connections**. Verify that there is a Local Area Connection and it is enabled. Right-click the Local Area Connection and select **Properties**. Ensure that TCP/IP is listed and selected in the Local Area Connection properties.
3. Verify that the serial ENET interface has been properly assigned an IP address or hostname by doing the following:
 - a. [Click here to start the NI Ethernet Device Configuration utility](#).
 - b. Look for the serial ENET interface you want to configure on the list of network devices. You can identify your interface by its serial number or Ethernet address printed on the baseplate label.
 - c. Is your serial ENET interface on the list of network devices?
 - **Yes**—Record the IP address or hostname of your interface from the IP address/hostname field. If there was an error, or the interface shows up as unconfigured, refer to the *Serial Hardware and Software for Windows Help* for instructions on configuring the interface. Go to step 4.

Click here to
open the *Serial Hardware and Software for Windows Help*.

- **No**—The NI Ethernet Device Configuration utility can discover your serial ENET interface only if it is on the same subnet as the computer running the utility. Contact your network administrator for the IP address of your serial ENET interface.
4. Verify that the IP Address is set correctly for your interface.
 - a. Under Measurement & Automation Explorer, expand the **Devices and Interfaces** folder. Select your installed serial ENET interface from the list of devices.
 - b. Identify the value of the IP address/hostname field in the attributes window.
 - c. Is the IP address/hostname value the same as the IP address or hostname value recorded in step 3?
 - **Yes**—go to step 6.
 - **No**—go to step 5.
 5. The serial ENET interface on your network is configured for an IP address or hostname that is different than the host machine's installed device. In this case, you need to delete the existing device and re-add your serial ENET interface with the correct settings.
 - a. Under Measurement & Automation Explorer, expand the **Devices and Interfaces** folder. Look for your serial ENET interface in the list of devices.
 - b. Right-click the interface and select **Delete** from the pop-up menu.
 - c. Right-click **Devices and Interfaces** and select **Create New...**
 - d. Choose **Serial ENET Interface** and click **Finish**.

- e. The Add Serial ENET Hardware Wizard opens with a list of interfaces currently installed on your system. Click **Next**.
 - f. Enter the same IP address that you recorded previously.
 - g. Click **Next** to install the interface and then click **Finish**.
6. Verify that the serial ENET interface is correctly configured for your network. The easiest way to do this is to use a network utility called ping. Find the directory where ping.exe is located, open the MS-DOS prompt under that directory, and type in the following command:

```
ping <IPaddress>
```

where <IPaddress> is the IP address assigned to your serial ENET interface. If your serial ENET interface is assigned a hostname, type in the following command instead:

```
ping <hostname>
```

If the ping utility cannot communicate with the serial ENET interface, verify your IP address/hostname with your network administrator. If the IP address/hostname is valid, contact [National Instruments](#) for more help.

Determining Resource Conflicts

Use the Windows Device Manager to determine which resources have a conflict.

1. [Click here to launch the Device Manager.](#)
2. Select the device that has the resource conflict and click the **Properties** button. A yellow exclamation point (!) indicates the device with the resource conflict.
3. Select the **Resources** tab and click the **Set Configuration Manually** button.
4. View the conflicting resource information to determine which resource conflicts with which device.
5. Click **OK** when you are finished.
6. In the **System Settings Change** dialog, click **Yes** to restart the computer or **No** if you want to restart the computer later.

Address Resource Conflict

This error occurs if the address resources assigned to a serial interface conflict with the address resources being used by other devices in the system.

Typically, resource conflicts occur when your system contains hardware that is configured to use the same resources as your serial interface. Resource conflicts are detected by NI-Serial when the driver is loaded. If there is a resource conflict, the driver fails to load and records an error in the [Event Viewer](#) describing why it failed to load.

[Determine the resource](#) that caused the conflict and select new resources that are not in conflict.

Use the [Windows System Information tool](#) to get a list of the resource usage that is known to the operating system. This utility displays a list of I/O addresses and interrupt levels that are currently in use.

Once you know what resources are in conflict, run the Windows Device Manager utility to configure the new conflict-free resources.

Device Manager.

[Click here to access the Windows](#)

Interrupt Resource Conflict

This error occurs if the interrupt resource assigned to a serial interface conflicts with the interrupt resource being used by another device in the system.

Typically, resource conflicts occur when your system contains hardware that is configured to use the same resources as your serial interface. Resource conflicts are detected by NI-Serial when the driver is loaded. If there is a resource conflict, the driver fails to load and records an error in the [Event Viewer](#) describing why it failed to load.

[Determine the resource](#) that caused the conflict and select new resources that are not in conflict.

Use the [Windows System Information tool](#) to get a list of the resource usage that is known to the operating system. This utility displays a list of I/O addresses and interrupt levels that are currently in use.

Once you know what resources are in conflict, run the Windows Device Manager utility to configure the new conflict-free resources.

Device Manager.

[Click here to access the Windows](#)

Unknown NI-Serial Software Error

An unknown NI-Serial software problem has occurred. Please try the following to resolve the problem before calling National Instruments:

1. Restart your system.
2. Run the NI-Serial Troubleshooting Wizard again.

If you still have the problem, try the following:

1. Uninstall NI-Serial for Windows.
2. Reinstall NI-Serial for Windows.
3. Restart your system.
4. Run the NI-Serial Troubleshooting Wizard again.

Unknown Hardware Error

An unknown serial hardware error has been encountered. The basic problem is that your hardware is not being correctly recognized by the system. Several of the possible causes for this problem are listed below:

The NI-Serial driver for your serial interface failed to load correctly due to a resource conflict.

Typically, resource conflicts occur when your system contains hardware that is configured to use the same resources as your serial interface. Resource conflicts are detected by NI-Serial when the driver is loaded. If there is a resource conflict, the driver fails to load and records an error in the [Event Viewer](#) describing why it failed to load.

[Determine the resource](#) that caused the conflict and select new resources that are not in conflict.

Use the [Windows System Information tool](#) to get a list of the resource usage that is known to the operating system. This utility displays a list of I/O addresses and interrupt levels that are currently in use.

Once you know what resources are in conflict, run the Windows Device Manager utility to configure the new conflict-free resources.

Device Manager.

[Click here to access the Windows](#)

Your serial interface is incorrectly installed or configured.

Verify that your serial interface is correctly installed and configured. For information about the installation and configuration of your serial hardware, refer to the *Serial Hardware and Software for Windows Help*.

[Click here to open the *Serial Hardware and Software for Windows Help*.](#)

Your serial interface appears to be installed correctly and working properly, but the NI-Serial Troubleshooting Wizard still reports this error.

Try restarting your computer and rerunning the NI-Serial Troubleshooting Wizard. If problems persist, contact [National Instruments](#) for more help.

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Branch Offices

Office	Telephone Number
Australia	1800 300 800
Austria	43 0 662 45 79 90 0
Belgium	32 0 2 757 00 20
Brazil	55 11 3262 3599
Canada	800 433 3488
China	86 21 6555 7838
Czech Republic	420 224 235 774
Denmark	45 45 76 26 00
Finland	385 0 9 725 725 11
France	33 0 1 48 14 24 24
Germany	49 0 89 741 31 30
India	91 80 41190000
Israel	972 0 3 6393737
Italy	39 02 413091
Japan	81 3 5472 2970
Korea	82 02 3451 3400
Lebanon	961 0 1 33 28 28
Malaysia	1800 887710
Mexico	01 800 010 0793
Netherlands	31 0 348 433 466
New Zealand	0800 553 322
Norway	47 0 66 90 76 60
Poland	48 22 3390150
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Singapore	1800 226 5886
Slovenia	386 3 425 42 00

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