

# Using Help

[Conventions](#)




[Navigating Help](#)

[Searching Help](#)

[Printing Help File Topics](#)

# Conventions

This help file uses the following conventions:

- < > Angle brackets that contain numbers separated by an ellipsis represent a range of values associated with a bit or signal name—for example, DBIO<3..0>.
- [ ] Square brackets enclose optional items—for example, [response].
- » 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.
- ♦ The ♦ symbol indicates that the following text applies only to a specific product, a specific operating system, or a specific software version.
-  This icon denotes a tip, which alerts you to advisory information.
-  This icon denotes a note, which alerts you to important information.
-  This icon denotes a caution, which advises you of precautions to take to avoid injury, data loss, or a system crash.
- blue** Text in this color denotes a specific platform and indicates that the text following it applies only to that platform.
- 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.
- dark red** Text in this color denotes a caution.
- green Underlined text in this color denotes a link to a help topic, help file, or Web address.
- italic* Italic text denotes variables or cross references. This font 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.

**monospace** 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 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

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.

# MAX Overview

Measurement & Automation Explorer (MAX) provides access to your National Instruments devices and systems.

With MAX, you can:

- Configure your National Instruments hardware and software
- Create and edit channels, tasks, interfaces, scales, and virtual instruments
- Execute system diagnostics
- View devices and instruments connected to your system
- Update your National Instruments software

In addition to the standard tools, MAX can expose item-specific tools you can use to configure, diagnose, or test your system, depending on which NI products you install. As you navigate through MAX, the contents of the application menu and toolbar change to reflect these new tools.

General information on each of the menu items is as follows. For device-specific help, please refer to the device help in the **Help** menu.

- [File Menu](#)
- [Edit Menu](#)
- [View Menu](#)
- [Tools Menu](#)
- [Help Menu](#)
- [General Tips](#)

## MAX File Menu

The **File** menu provides the following options:

**New»Window**—Opens a new Measurement & Automation Explorer (MAX) window.

**Save All**—Saves all pending changes made in MAX.

**Create Report**—Starts the [MAX Report Wizard](#). Use this wizard to create a printable report of a local or remote system, including system configuration.

**Import**—Starts the [Configuration Import Wizard](#). Use this wizard to import configuration data from a file.

**Export**—Starts the [Configuration Export Wizard](#). Use this wizard to export configuration data to a file.

**Exit**—Exits MAX.

## MAX Edit Menu

The **Edit** menu provides the following options:

**Undo**—Reverses the last action. Enabled only if supported by the item selected in the configuration tree.

**Redo**—Repeats the last undone action. Enabled only if supported by the item selected in the configuration tree.

## MAX View Menu

The **View** menu provides the following options:

**Toolbar**—Sets the toolbar display options, as follows:

- **Text Labels**—Displays toolbar text labels below the toolbar icons.
- **Text on the right**—Displays toolbar text labels to the right of the toolbar icons.
- **No Text Labels**—Displays the toolbar icons only.

**Status Bar**—Displays or hides the status bar on the bottom of your MAX window.

**Configuration**—Displays or hides the MAX configuration tree.

**Help Pane**—Displays or hides task list embedded help. You can also click the Show Help or Hide Help buttons to perform the same action.

**Refresh**—Refreshes the MAX configuration tree. You can also press <F5> to refresh the configuration tree.

## MAX Tools Menu

The **Tools** menu provides the following standard options:

**NI Registration Wizard**—Helps you discover and register your National Instruments products to facilitate technical support and ensure you receive important updates. The information you submit will be handled in accordance with the [National Instruments Privacy Statement](https://www.ni.com/legal) at [ni.com/legal](https://www.ni.com/legal).

**RT Disk Utilities**—Provides disk utilities to use with LabVIEW Real-Time systems, if installed:

- Create Desktop PC Utility USB Drive
- Create PXI Format Hard Drive Disk
- Create PXI Boot Disk
- Create PXI Safe Mode Disk
- Create Desktop PC Format Hard Drive Disk
- Create Desktop PC Boot Disk
- Create Desktop PC Safe Mode Disk
- Create Launch Settings Reset Disk
- Create IP Reset Disk
- Create Uninstall Disk

For more information on RT systems, refer to the Remote Systems section of this help file.

**National Instruments Product Updates**—Launches the National Instruments Update Wizard, which helps you check for newer product versions or updates. Use the Update Wizard to update your measurement system quickly and easily.

**Install legacy driver support**—Installs support for device drivers supported in MAX 1.1, including:

- FlexMotion 4.5
- IVI Engine 1.52
- NI-488.2 1.0 for USB-A
- NI-DAQ 6.5, 6.6, 6.7
- NI-IMAQ 2.2
- ValueMotion 4.3



In addition to the standard tools, MAX can expose item-specific tools you can use to configure, diagnose, or test your system, depending on which NI products you install. As you navigate through MAX, the contents of the application menu change to reflect these new tools.

# MAX Help Menu

The **Help** menu provides the following options:

**MAX Help**—Opens the main [help](#) file. You can also press <F1> to access the help file.

**Help Topics**—Provides access to installed MAX help topics. Help topics vary, depending on which NI products you install.

**National Instruments on the Web**—A link to Internet resources on [ni.com](#), such as technical support pages and a Web site search engine.

**Technical Support**—Provides information about and links to [MAX technical support](#) resources.

**System Information**—Provides a snapshot of your system, with information such as operating system version, processor information, RAM amount, and installed NI software. You can click the **Copy All** button to copy the information to your clipboard so that you can then paste it into a document.

**Patents**—Displays the National Instruments patent information.



**About**—Opens the **About Measurement & Automation Explorer** dialog box, which displays the program name, version, and copyright statement.

In addition to the standard tools, MAX can expose special tools you can use to help configure, diagnose, or test your system, depending on which NI products you install. As you navigate through MAX, the contents of the application menu and toolbar change to reflect these new tools.

# Tips for Using MAX

## MAX Tips

Use the following tips to enhance your MAX experience:

- **Refreshing a View**—Select the **View»Refresh** menu item or press <F5> to refresh a view after installing a new interface or device. Most devices and interfaces refresh automatically.
- **Using Multiple Views**—Click and drag an item view tab outside of the MAX interface to undock the tab and see multiple item views at once. An item view is the tabbed middle window that appears when you click on a device in the left-hand configuration tree. This view usually displays configuration settings for the device. To return the tabbed window to its original position, close the tab or drag it near the item view.
- **Pinning Views**—Click the pin icon  in the toolbar of an undocked, floating item view to keep it from closing as you browse to other items in the configuration tree.
- **Viewing Help**—Toggle the help pane on and off with the **Show/Hide Help** button that appears directly above the help window. You can also click the **Float** button  above the help pane to move it outside of the MAX interface. To return the help pane to its original position, click the **Float** button again.
- **Configuring Multiple Devices at Once**—Create a new MAX window (**File»New»Window** menu item) or pin a view if you want to configure more than one device or system at once.
- **Selecting Multiple Tree Items**—Select multiple items in the configuration tree by holding the <Ctrl> or <Shift> as you make your selections. The right-hand view goes blank as you select multiple items.

If your selected group of items supports using batched commands, toolbar buttons appear and you can right-click on one of the selected items to obtain a context menu. Otherwise, the toolbar remains blank and no context menu appears. Batched commands allow you to perform the same operation on multiple items at once.

## MAX Categories

There are six typical categories in MAX, as follows:

- **Data Neighborhood**—Use this selection to create virtual channels, tags, and aliases to your channels or measurements configured in Devices and Interfaces.
- **Devices and Interfaces**—Use this selection to configure resources and other physical properties of your devices and interfaces.
- **Scales**—Use this selection to set up simple operations to perform on your acquired data.
- **Software**—Use this selection to view, launch, and update your installed National Instruments software.
- **IVI**—Use this selection to configure your IVI Instruments (IVI 1.x) or IVI Drivers (IVI 2.0 and later).
- **Remote Systems**—Use this selection to view and configure devices and systems connected over Ethernet.

# Using the MAX Report Wizard

Use the MAX Report Wizard to [document your system or a remote system](#) or to [generate a system information report](#) for technical support. You can include in the report all configuration information viewable in MAX and some information not viewable directly from the MAX configuration tree, such as global product settings, software information, and calibration information. The level of configuration detail included for each item depends on the item's driver software.

## Configuration Reports

To generate a configuration report, launch the MAX Report Wizard (**File»Create Report** menu selection) and complete the following steps:

1. Select the level of detail you want in your report, either **Simple report** or **Custom report**. A simple report consists of just the MAX tree item names and icons. In a custom report, you can select the items you want to document and receive a more detailed report for those items.



**Note** The amount of detail you see in the report depends on whether each installed product supports this feature. If a product does not support report generation, then the report generates only a basic list of devices, even if you select **Custom**.

2. Select the system from which you want a report, either the local system or a remote system. You can select only one system at a time. You can also enter the IP address of a remote system. Click **Next**.
3. Select which items you want to include in the report. Click **Next**.
4. Specify the location of the generated files. The MAX Report Wizard remembers the last location entered. If this is the first time you have run the MAX Report Wizard, the location defaults to the My Documents\MAX (Windows XP/2000) or Documents\MAX (Windows Vista) directory.



**Note** Your filename must have either a .htm or .html file extension.

5. Click **Next** to generate the report. Depending on the complexity of the selected system, the MAX Report Wizard may take a few

minutes to complete.

6. A final dialog displays information about what files were generated. Click **View Report** to launch your default browser and view the report immediately after closing the wizard. If you want to modify the report, you can edit the HTML or copy and paste it into another editor.



**Tip** To save the report in one file, open the report in Internet Explorer and select the **File»Save As** menu item. Select **Web Archive, single file (\*.mht)** in the **Save as Type** selection box and click **Save**. You can open the resulting file in Internet Explorer only.

## System Information Reports

To generate a system information report for [technical support](#), launch the MAX Report Wizard (**File»Create Report**) and select **Technical Support**.

The wizard creates a compressed file that contains the generated report as well as any other files you want to include.

## Installed Products

This section displays the help for your installed products. If you do not see your product listed, you can also refer to the **Help»Help Topics** menu selection to find your product's help file, if one is available.

# Important Information

[Warranty](#)

[Copyright](#)

[Trademarks](#)

[Patents](#)

[Warning Regarding Use of NI Products](#)



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# MAX Technical Support

You can create two kinds of reports in MAX—configuration reports for documenting a selected system and system information reports for technical support purposes.

## Configuration Reports

Create a configuration report by launching the MAX Report Wizard (**File»Create Report**) and selecting **Simple** or **Custom**. This wizard creates an HTML-based report of your selected system's configuration. Refer to [Using the MAX Report Wizard](#) for more information.

## System Information Reports

You can create System Information Reports for technical support by launching the MAX Report Wizard (**File»Create Report**) and selecting **Technical Support**. You can include these reports when you use the Web-based [NI Technical Support/Request Support](#) service to expedite the resolution of your issue. Refer to [Using the MAX Report Wizard](#) for more information.

## Technical Support Resources

For more information about NI technical support and professional services, refer to [Technical Support Resources](#).

# Technical Support and Professional Services

Visit the following sections of the National Instruments Web site at [ni.com](http://ni.com) for technical support and professional services:

- [Support](#)—Online technical support resources at [ni.com/support](http://ni.com/support) include the following:
  - **Self-Help Resources**—For answers and solutions, visit the award-winning National Instruments Web site for software drivers and updates, a searchable [KnowledgeBase](#), [product manuals](#), step-by-step troubleshooting wizards, thousands of example programs, tutorials, application notes, instrument drivers, and so on.
  - **Free Technical Support**—All registered users receive free Basic Service, which includes access to hundreds of Applications Engineers worldwide in the [NI Discussion Forums](#) at [ni.com/forums](http://ni.com/forums). National Instruments Applications Engineers make sure every question receives an answer. For information about other [technical support options](#) in your area, visit [ni.com/services](http://ni.com/services) or [contact](#) your local office at [ni.com/contact](http://ni.com/contact).
- [Training and Certification](#)—Visit [ni.com/training](http://ni.com/training) for self-paced training, eLearning virtual classrooms, interactive CDs, and Certification program information. You also can register for instructor-led, hands-on courses at locations around the world.
- [System Integration](#)—If you have time constraints, limited in-house technical resources, or other project challenges, National Instruments Alliance Partner members can help. To learn more, call your local NI office or visit [ni.com/alliance](http://ni.com/alliance).

If you searched [ni.com](http://ni.com) and could not find the answers you need, contact your [local office](#) or NI corporate headquarters. You also can visit the [Worldwide Offices](#) section of [ni.com/niglobal](http://ni.com/niglobal) to access the branch office Web sites, which provide up-to-date contact information, support phone numbers, email addresses, and current events.



## Branch Offices

Office	Telephone Number
Australia	1800 300 800
Austria	43 662 457990-0
Belgium	32 (0) 2 757 0020
Brazil	55 11 3262 3599
Canada	800 433 3488
China	86 21 5050 9800
Czech Republic	420 224 235 774
Denmark	45 45 76 26 00
Finland	358 (0) 9 725 72511
France	33 (0) 1 57 66 24 24
Germany	49 89 7413130
India	91 80 41190000
Israel	972 0 3 6393737
Italy	39 02 41309277
Japan	0120-527196 / 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
Portugal	351 210 311 210
Russia	7 495 783 6851
Singapore	1800 226 5886
Slovenia	386 3 425 42 00

South Africa	27 0 11 805 8197
Spain	34 91 640 0085
Sweden	46 (0) 8 587 895 00
Switzerland	41 56 2005151
Taiwan	886 02 2377 2222
Thailand	662 278 6777
Turkey	90 212 279 3031
United Kingdom	44 (0) 1635 523545
United States (Corporate)	512 683 0100