RELEASE NOTES

Measurement Studio™

These release notes introduce Measurement Studio 2010. Refer to this document for information about new features and functionality, installation requirements, installation instructions, deployment requirements, and resources in Measurement Studio 2010.

For a complete introduction to Measurement Studio and to learn about Measurement Studio concepts, controls, and features, refer to *Getting Started with Measurement Studio*. Select **Start»All Programs»National Instruments»<Measurement Studio>»Getting Started Guide** to access the guide.

For a list of fixed bugs and known issues, refer to the *Measurement Studio Readme*. There is a different *Measurement Studio Readme* for each supported version of Visual Studio. The *Measurement Studio Readme* files are available in the Readme folder under the root directory of your installation media and are linked from the Autorun application. After installing Measurement Studio 2010, select **Start»All Programs» National Instruments»<Measurement Studio>»Readme** to access the *Measurement Studio 2010 Readme*.

Note There are separate Start menu items for each version of Visual Studio support that you have installed.

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About Measurement Studio

Measurement Studio is an integrated suite of tools and class libraries that are designed for developers using Microsoft .NET technologies to develop measurement and automation Windows and Web applications.

Measurement Studio provides object-oriented measurement hardware interfaces, advanced analysis libraries, scientific user interface controls for Windows and Web applications, measurement data networking libraries, wizards, interactive code designers, and highly extensible .NET classes. You can use Measurement Studio to develop a complete measurement and automation application that includes data acquisition, analysis, and presentation functionalities.

What's New in Measurement Studio 2010

Measurement Studio 2010 includes the following new features. Refer to the *New Features in Measurement Studio 2010* section for more information.

- .NET class library support for Visual Studio 2010

- Intensity graph

- Code snippets for .NET UI controls

- License activation

- Additional improvements

  - Expanded tone information classes in Analysis .NET class library

  - Bug fixes

New Features in Measurement Studio 2010

.NET Class Library Support for Visual Studio 2010

Measurement Studio 2010 introduces .NET support for Visual Studio 2010, including a complete set of .NET class libraries and tools that integrate into Visual Studio 2010. To use these new libraries, either create new projects in Visual Studio 2010 or use Visual Studio 2010 to upgrade your existing Visual Studio 2008 or Visual Studio 2005 projects that use Measurement Studio libraries.

The Measurement Studio class libraries for Visual Studio 2010 have different versions and different public key tokens than the corresponding Measurement Studio class libraries for Visual Studio 2008 and Visual Studio 2005. The version numbers for Visual Studio 2010 support assemblies begin with 9.0.40; the version numbers of Visual Studio 2008 support assemblies begin with 9.0.35; and the version numbers of Visual Studio 2005 support assemblies begin with 9.0.20. If you use the public key token to verify the identity of Measurement Studio class libraries, you need to modify your code or system configuration to accommodate the new public key token.

Note Measurement Studio assemblies reference Microsoft assemblies that are not part of the .NET Framework 4.0 Client Profile. Consequently, Measurement Studio assemblies do not work with the .NET Framework 4.0 Client Profile.

Note In Visual Studio 2010, if you create a Visual C++ CLR project and then add a Measurement Studio control, by default Visual Studio does not embed the license for the Measurement Studio control into the compiled application. To work around this issue, you can manually set the `licenses.licx` file to build with the License Compiler. For more information, refer to *Updating the .licx File Without Visual Studio-Integrated Tools* topic in the *NI Measurement Studio Help*.

Integrated Help for Visual Studio 2010 Support

In addition to new class libraries, Measurement Studio 2010 also includes documentation integrated into the new Microsoft Visual Studio 2010 documentation viewer.

Help Configuration Utility

Measurement Studio provides a tool,
`HelpConfigurationUtility.exe`, that you can use to install
Measurement Studio for Visual Studio 2010 documentation to other
Microsoft documentation locales. You can also use the Help
Configuration Utility to uninstall or reinstall Measurement Studio
documentation for Visual Studio 2010. For more information on how to use
this utility, refer to the *Help Configuration Utility Readme* located at
`[installdir]\Help\HelpConfigurationUtility`.

![Note icon] **Note** When using the Help Configuration Utility, National Instruments recommends that
you always uninstall and reinstall all Measurement Studio help components. Installing
Measurement Studio help components separately could cause unexpected results when
viewing the help.

Working with Integrated Help

Review the following tips for working with the integrated help:

*   To view NI Measurement Studio 2010 Help, you must install the
    Microsoft Developer Network (MSDN) documentation for Visual
    Studio 2010 before you install the Measurement Studio help. To work
    around this issue, you can install MSDN help and then either run the
    Measurement Studio installer in Repair Mode or use the Help
    Configuration Utility to reinstall the Measurement Studio help. The
    following instructions explain both workarounds:

    Running the Measurement Studio Installer in Repair Mode

    1. Select **Start»Control Panel**.

    2. Select **Add or Remove Programs**.

    3. Select **National Instruments Software** and click
        Change/Remove.

    4. In the National Instruments Software dialog box,
        select **NI Measurement Studio for VS2010**.

    5. Click **Repair**.

    Using the Help Configuration Utility

    1. Navigate to the following directory:
        `[installdir]\Help\HelpConfigurationUtility`.

    2. Double-click **HelpConfigurationUtility.exe** to launch the utility.

    3. Select the checkbox for the available Measurement Studio help
        components you want to install. National Instruments
        recommends you always install all Measurement Studio help
        components. Installing Measurement Studio help components
        separately could cause unexpected results when viewing the help.

4. Select the Microsoft Help Library Locale where you want to install the Measurement Studio documentation.

5. Click **Install** to install the documentation.

- Integrated Measurement Studio help for Visual Studio 2010 support installs with an English (en-us) locale. If you are using the Visual Studio 2010 documentation with a different locale, the default installation of Measurement Studio documentation will not fully integrate with the Visual Studio 2010 documentation. Use the Help Configuration Utility to install Measurement Studio documentation for Visual Studio 2010 to other Microsoft documentation locales.

- If you choose to view the Microsoft Visual Studio 2010 help online, the help viewer launches the Microsoft Developer Network (MSDN) Web site, which does not include the *NI Measurement Studio Help*. To view the Measurement Studio help, select **Start»All Programs»National Instruments»Measurement Studio 2010 for Visual Studio 2010» Measurement Studio Documentation**.

Related Documentation

Refer to the following topics for more information about Visual Studio 2010 support and about working with different versions of Measurement Studio:

- **Conceptual help**—Refer to the following topics in the *NI Measurement Studio Help* for more information:
    – *Measurement Studio Core Overview*
    – *Measurement Studio Year-Based and Major.Minor Version Equivalents*
    – *Measurement Studio .NET Class Library Versioning for Development and Deployment*
    – *Using the Measurement Studio Help*

- **Web resources**—Review the information from the Microsoft Web site on using Visual Studio 2010.

Intensity Graph

An intensity graph uses color to display 3D data on a 2D plot area. For example, you can use an intensity graph or chart to display patterned data, such as weather or terrain patterns, where magnitude represents temperature or altitude, respectively. The intensity graph accepts a 2D array of data, and each value represents a block of color on the graph. The colors displayed on an intensity graph or chart correspond to the numeric values associated with the specified colors. Color mapping is useful for visually indicating data ranges, such as when plot data exceeds a threshold value.

Related Documentation

Refer to the following resources for more information about the intensity graph:

- **Conceptual help**—Refer to *Using the Measurement Studio Windows Forms Intensity Graph .NET Control* for a list of topics about specific intensity graph features.

- **Reference**—Refer to the `IntensityGraph` class for function reference documentation.

- **Examples**—Refer to *Where to Find Examples* for the location of intensity graph example programs.

Code Snippets for .NET UI Controls

Measurement Studio 2010 documentation includes new code snippets for Windows Forms and Web Forms UI controls that you can copy and paste into an application to easily learn how to use methods and properties. For example, refer to the code snippet in `NationalInstruments.UI.WindowsForms.IntensityGraph.Plot` to learn how to use this method to plot an array of values on an intensity graph.

Related Documentation

Refer to the following resources for more information about UI code snippets:

- **Reference**—Refer to specific method documentation in the *Developing Projects with Measurement Studio* section of the *NI Measurement Studio Help* for the `WindowsForms` namespace.

- **Examples**—Refer to *Where to Find Examples* in the *NI Measurement Studio Help* for the location of the `WinForms Code Snippets` program, which incorporates all of the UI control code snippets into one example program. The `WinForms Code Snippets` program is only available for Visual Studio 2008 and Visual Studio 2010.

License Activation

National Instruments uses activation to better support evaluation of our software, switching between editions, and centralized volume license management in large organizations. You can use activation to manage and upgrade your evaluation software or to change your Measurement Studio edition. For more information, refer to `ni.com/activate`.

If you did not activate Measurement Studio during installation, you can activate Measurement Studio using the NI Activation Wizard by selecting **Start»All Programs»National Instruments»NI License Manager**.

To activate Measurement Studio, you need the serial number, which you can find on the Certificate of Ownership card included in your software kit.

If at a later time you decide to move to a different product edition, such as upgrading from Measurement Studio Standard Edition to Measurement Studio Professional Edition, you can activate the new edition by using NI License Manager. See the *Activating Measurement Studio Licenses* section of this document for more information.

Related Documentation

Refer to the following resources for more information about license activation:

- **Conceptual help**—Refer to *Licensing, Evaluation, and Activation* and *National Instruments Software Activation* in the *NI Measurement Studio Help* for more information about activation.

- **Web resources**—Refer to `ni.com/license` for more information on licensing National Instruments software, including Measurement Studio.

Additional Improvements

Measurement Studio 2010 also introduces the following new features:

- **Expanded Tone Information Classes in Analysis .NET Class Library**—Measurement Studio 2010 includes an updated algorithm in the `SingleToneInformation` class that improves performance for tones near the DC or Nyquist frequency. Additionally, Measurement Studio 2010 includes new classes in the `SpectralMeasurements` namespace, `MultipleToneInformation`, `MultipleToneInformationComplex`, and `SingleToneInformationComplex` which you can use to extract multiple tones from both simple and complex data.

- **Bug Fixes**—Measurement Studio 2010 includes many fixes for previously reported bugs. Refer to the fixed bug chart in the *Measurement Studio Readme* for more information. Select **Start» All Programs»National Instruments»<Measurement Studio>» Readme** to access the *Measurement Studio Readme*.

Legacy Languages and Frameworks

NI Measurement Studio 2009 was the last version of Measurement Studio to support Visual Studio 6.0, Visual Studio 2003, and Visual C++ MFC. NI Measurement Studio 2010 does not offer new feature support for Visual Studio 6.0, Visual Studio 2003, or Visual C++ MFC.

NI Measurement Studio 2010 provides new feature support for Visual C# and Visual Basic .NET for Visual Studio 2010, Visual Studio 2008, and Visual Studio 2005.

Measurement Studio new feature support is not provided for:

- Visual Studio 2008 (Visual C++ MFC)
- Visual Studio 2005 (Visual C++ MFC)
- Visual Studio 2003 (Visual C++ MFC, Visual C#, Visual Basic .NET)
- Visual Studio 6.0 (Visual Basic 6.0, Visual C++ 6.0)

Note For information on NI device driver support for Visual C++ MFC, refer to the *Driver Support* section of these release notes.

Measurement Studio for Legacy Environments/Languages

NI Measurement Studio 2009 was the last version of Measurement Studio to provide support for Visual Studio 6.0, Visual Studio 2003, and Visual C++ MFC. If you want to continue building or developing applications using these legacy environments/languages, you can use the *NI Measurement Studio for Legacy Environments/Languages* product, which includes the NI Measurement Studio 2009 DVD, the NI Measurement Studio 8.1.2 for Visual Studio 6.0 CD, and the November 2009 NI Driver DVD. *NI Measurement Studio for Legacy Environments/Languages* is available upon request for qualifying Measurement Studio customers.

Requesting NI Measurement Studio for Legacy Environments/Languages

To qualify to receive *NI Measurement Studio for Legacy Environments/Languages*, you must meet either of the following criteria:

1. You must maintain an active Measurement Studio Standard Service Program (SSP) contract; or

2. You must have purchased the most recent version of Measurement Studio.

Refer to ni.com/info and enter Info Code MFCsupport if you require Visual C++ MFC support for Visual Studio 2010. For additional information or to request *NI Measurement Studio for Legacy Environments/Languages*, please contact a Technical Sales Representative at ni.com/contact.

Configuring Your System to Use Measurement Studio 2010 .NET Support with Prior Versions of Measurement Studio Visual C++ MFC Support

Measurement Studio 2010 for Visual Studio 2005 or Visual Studio 2008 does not include Visual C++ MFC support. However, if you install Measurement Studio 2010 for Visual Studio 2005 or Visual Studio 2008 on a machine that has a prior version of Measurement Studio Visual C++ MFC support already installed, the installer does not remove the Visual C++ MFC class libraries from the prior version. Visual C++ MFC class libraries remain on the system and available for use.

Installation Considerations

You cannot install Measurement Studio 2009 or earlier Visual C++ MFC support for Visual Studio 2005 or Visual Studio 2008 **after** installing Measurement Studio 2010 .NET support for Visual Studio 2005 or Visual Studio 2008.

Uninstallation Considerations

If you have Measurement Studio 2010 and Measurement Studio 2009 or an earlier version installed for the same Visual Studio version and you elect to uninstall one version of Measurement Studio, review the following uninstall notes to ensure that the version remaining on your machine continues to function properly. These uninstallation considerations only apply if you have two versions of Measurement Studio installed for the same version of Visual Studio.

- After installing Measurement Studio 2009 and then Measurement Studio 2010, if you need to uninstall Measurement Studio 2009, your Measurement Studio 2010 installation will be broken. You can repair your Measurement Studio 2010 installation by opening the Windows Control Panel and selecting **Add or Remove Programs»National Instruments Software»Change/Remove**. In the resulting National Instruments Softare dialog box, select **Repair**.

- After installing Measurement Studio 2009 and then Measurement Studio 2010, if you uninstall Measurement Studio 2010, your Measurement Studio 2009 installation will be broken. To fix this issue, you must uninstall and reinstall Measurement Studio 2009.

Note There are no special considerations for installing and uninstalling Visual Studio 6.0 support.

Installation Requirements

Measurement Studio 2010 includes support for Visual Studio 2010, Visual Studio 2008, and Visual Studio 2005. The following are the installation requirements for each supported version of Visual Studio.

Installation Requirements for Visual Studio 2010 Support

To use Measurement Studio support for Visual Studio 2010, your computer must have the following:

- Microsoft operating system:
    - Windows 7 (32-bit or 64-bit), including Starter Edition (32-bit)
    - Windows Vista (32-bit or 64-bit)
    - Windows XP, Service Pack 3 (32-bit)
    - Windows Server 2003 R2 (32-bit)
    - Windows Server 2008 R2 (64-bit)
- Microsoft .NET Framework 4.0
- Visual Studio 2010:
    - Ultimate Edition
    - Premium Edition
    - Professional Edition
    - Visual C# Express Edition
    - Visual Basic Express Edition
    - Visual Web Developer Express Edition
- Video display—1024 × 768, 256 colors (16-bit color recommended for user interface controls)
- Minimum of 800 MB of free hard disk space
- Microsoft-compatible mouse
- Microsoft Internet Explorer 6.0 or later

Installation Requirements for Visual Studio 2008 Support

To use Measurement Studio support for Visual Studio 2008, your computer must have the following:

- Microsoft operating system:
    - Windows 7 (32-bit or 64-bit), including Starter Edition (32-bit)
    - Windows Vista (32-bit or 64-bit)
    - Windows XP (32-bit)

- Windows Server 2003 R2 (32-bit)
- Windows Server 2008 R2 (64-bit)
- Microsoft .NET Framework 3.5
- Visual Studio 2008:
  - Team System Edition
  - Professional Edition
  - Standard Edition
  - Visual C# Express Edition
  - Visual Basic .NET Express Edition
  - Visual Web Developer Express Edition

Note You must have Visual Studio 2008 Service Pack 1 or later installed on your machine for Measurement Studio to function properly.

- Video display—1024 × 768, 256 colors (16-bit color recommended for user interface controls)
- Minimum of 800 MB of free hard disk space
- Microsoft-compatible mouse
- Microsoft Internet Explorer 6.0 or later

Installation Requirements for Visual Studio 2005 Support

To use Measurement Studio support for Visual Studio 2005, your computer must have the following:

- Microsoft operating system:
  - Windows 7 (32-bit or 64-bit), including Starter Edition
  - Windows Vista (32-bit or 64-bit)
  - Windows XP (32-bit)
  - Windows Server 2003 R2 (32-bit)
  - Windows Server 2008 R2 (64-bit)

Note Measurement Studio class libraries are designed to work on 64-bit operating systems. However, Measurement Studio class libraries for Visual Studio 2005 cannot be used to create 64-bit applications. To use Measurement Studio class libraries for Visual Studio 2005 on a 64-bit operating system, you must configure your projects to build 32-bit applications or libraries.

- Microsoft .NET Framework 2.0

- Visual Studio 2005:
  - Team System Edition
  - Professional Edition
  - Standard Edition
  - Visual C# Express Edition
  - Visual Basic .NET Express Edition
  - Visual Web Developer Express Edition

Note This version of Measurement Studio supports, and was tested with, Visual Studio 2005 Service Pack 1 (SP1). National Instruments recommends using Measurement Studio with Visual Studio 2005 SP1. On Windows Vista systems, National Instruments strongly recommends using Measurement Studio with Visual Studio 2005 SP1 and Visual Studio 2005 SP1 Update for Windows Vista.

- Video display—1024×768, 256 colors (16-bit color recommended for user interface controls)
- Minimum of 800 MB of free hard disk space
- Microsoft-compatible mouse
- Microsoft Internet Explorer 6.0 or later

Installation Notes

- Measurement Studio does not support Windows Vista Starter Edition.
- Measurement Studio 2010 does not support non-R2 editions of Windows Server.
- This version of Measurement Studio supports, and was tested with, the latest operating system service packs that were available at the time this version of Measurement Studio was released. National Instruments strongly recommends using Measurement Studio with the latest operating system service pack.
- If you want to upgrade your operating system from one major version to another, National Instruments recommends first uninstalling all National Instruments software, including application software and drivers. This is typically not necessary when installing an operating system service pack.
- Microsoft Visual Studio Express Editions do not support Measurement Studio integrated tools.
- In order for links from Measurement Studio help topics to .NET Framework help topics to work, you must install the product documentation for Visual Studio, which installs the MSDN Library. This requires a secondary installation during the Visual Studio installation process.

- Some National Instruments components require Microsoft Silverlight 4.0. If you use a component that requires Silverlight, a dialog box prompts you to install Silverlight from the Internet. Microsoft Silverlight 4.0 is available from the Microsoft Web site at `http://www.microsoft.com/silverlight`. Measurement Studio does not contain Silverlight controls.

Driver Support

To use .NET class libraries that interface to National Instruments device drivers, NI-DAQmx, NI-VISA, NI-488.2, NI-SCOPE, NI-IMAQ, NI-IMAQdx, and the MAX (Measurement & Automation Explorer) configuration utility, you must install the underlying device drivers and the .NET class libraries. You can install the device drivers and the .NET class libraries from the NI Device Drivers DVD included with Measurement Studio.

Refer to *NI Drivers and Updates* on `ni.com` and enter `Device Drivers` into the search field to download the latest version of the NI Device Drivers.

Driver Support Notes

Refer to the following sections for information about .NET support for NI device drivers.

- The DAQ Assistant and the Instrument I/O Assistant are installed from the NI Device Drivers DVD. You must install the NI Device Drivers DVD to use the assistants.

- Visual Studio 2010 support:
  – The following drivers provide 32-bit and 64-bit support for Visual Studio 2010: NI-DAQmx 9.2.3 and later, NI-VISA 5.0.3 and later, and NI-488.2 2.8.1 and later.
  – The following drivers do not provide support for Visual Studio 2010: NI-IMAQ, NI-IMAQdx, MAX (Measurement & Automation Explorer), and NI-SCOPE. Refer to *Measurement Studio 2010 Known Issues* on `ni.com` for more information.

- Visual Studio 2008 support:
  – 64-bit support is available in class libraries for Visual Studio 2008 for the following drivers: NI-DAQmx 8.9.5 and later, NI-VISA 4.5.1 and later, NI-488.2 2.7.1 and later, and MAX 4.6 and later.

- Visual Studio 2005 support:
  – 64-bit support is not available in class libraries for Visual Studio 2005.

- Visual C++ MFC 2005 and Visual C++ MFC 2008 support:
  - The following drivers versions are the last that include full feature support for Visual C++ MFC 2005 and Visual C++ MFC 2008: NI-DAQmx 9.2, NI-VISA 5.0.2, and NI-488.2 2.8.
  - The following drivers do not provide support for Visual C++ MFC 2005 and Visual C++ MFC 2008: NI-IMAQ, NI-IMAQdx, MAX (Measurement & Automation Explorer), and NI-SCOPE.
- To download NI-SCOPE .NET class libraries, refer to *NI-SCOPE .NET Driver Support* on ni.com.

Installation Instructions

Complete the following steps to install Measurement Studio. These steps describe a typical installation. Please carefully review all additional licensing and warning dialog boxes.

National Instruments recommends that you exit all programs before running the Measurement Studio installer. Applications that run in the background, such as virus scanning utilities, might cause the installer to take longer than necessary to complete.

Installing Measurement Studio

Complete the following steps to install Measurement Studio:

1. Log on as Administrator or as a user with administrator privileges.

2. Launch Autorun.exe, either from the installation media or from the location to which you extracted the downloaded disc image. Select **Install Measurement Studio**.

3. Select Measurement Studio 2010 support for the version or versions of Visual Studio you want to install support for.

4. Follow the instructions that appear on the screen.

Tip You can use a spec file to programmatically control the Measurement Studio installer for a single distribution or for the entire suite. An example spec file for a single distribution is located on your installation media at <drive>:Distribution\Measurement Studio for VS20xx\Bin\template_spec.txt. For more information, refer to *KnowledgeBase Article 4CJDP38M: Automating the Installation of a Single Installer* on ni.com. Alternately, you can generate a spec file for the entire Measurement Studio suite. Refer to *KnowledgeBase Article 4GGGDQH0: Automating the Installation of a Suited Installer* on ni.com for instructions on how to generate a spec file for your suite.

Note For additional information related to installing support for legacy languages, refer to the *Configuring Your System to Use Measurement Studio 2010 .NET Support with Prior Versions of Visual C++ MFC Support* section of this document.

Activating Measurement Studio Licenses

After you install Measurement Studio, you must use the NI Activation Wizard to activate the software. To activate Measurement Studio, you need the serial number printed on the Certificate of Ownership included in your software kit. Refer to the *Licensing, Evaluation, and Activation* topic in the *NI Measurement Studio Help* for more information about how to activate Measurement Studio. Measurement Studio 2010 is the first version of Measurement Studio to use activation.

National Instruments offers a variety of Measurement Studio licenses, with certain licensed features available for each license type: Standard Edition, Professional Edition, and Enterprise Edition. Refer to the *Measurement Studio Editions* topic in the *NI Measurement Studio Help* for more information on Measurement Studio editions, and the *Licensing Measurement Studio* topic in the *NI Measurement Studio Help* for more information about licensing Measurement Studio.

Note To move to a different Measurement Studio edition, you can activate the new edition by using NI License Manager. Select **Start»All Programs»NationalInstruments» NI License Manager** to access NI License Manager.

For general license activation information, refer to ni.com/activate. Refer to ni.com/mstudio to purchase a Measurement Studio license. Contact a local National Instruments representative at ni.com/contact for more information or for questions about specific licensing needs.

Installing the Current Version of Measurement Studio over Previous Versions of Measurement Studio

You can have only one version of Measurement Studio installed on a system for each version of Visual Studio or the .NET Framework installed on the system. For example, you can have Measurement Studio 2010 for Visual Studio 2010 installed on the same system as Measurement Studio 8.6.1 for Visual Studio 2008, but you cannot have Measurement Studio 2010 for Visual Studio 2008 installed on the same system as Measurement Studio 8.6.1 for Visual Studio 2008.

If you install a newer version of Measurement Studio on a machine that has a prior version of Measurement Studio installed, the newer version installer replaces the prior version functionality, including class libraries. However, the prior version assemblies remain in the global assembly cache (GAC);

therefore, applications that reference the prior version continue to use the prior version .NET assemblies.

Note `NationalInstruments.Common.dll` uses a publisher policy file to redirect applications to always use the newest version of `NationalInstruments.Common.dll` installed on the system, for each version of the .NET Framework. However, prior versions of `NationalInstruments.Common.dll` remain in the GAC after you install a newer version of Measurement Studio. National Instruments exerts extra effort to ensure that `NationalInstruments.Common.dll` is backward-compatible so that applications built against prior versions of Measurement Studio continue to work as expected.

Note For additional information related to installing support for legacy languages, refer to the *Configuring Your System to Use Measurement Studio 2010 .NET Support with Prior Versions of Visual C++ MFC Support* section of this document.

Deployment Requirements

To deploy an application built with Measurement Studio .NET class libraries, the target computer must have a Windows 7/Vista/XP/Server 2003 and 2008 (R2 editions) operating system and the .NET Framework version 4.0 for Visual Studio 2010, the .NET Framework version 3.5 for Visual Studio 2008, or the .NET Framework version 2.0 for Visual Studio 2005.

Deploying 64-bit Applications

To facilitate use in Visual Studio Setup projects, all Measurement Studio class libraries that support 64-bit include both 32-bit and 64-bit deployment merge modules. This is true regardless of whether the class library includes platform-specific (i.e., x86 or x64) or platform-agnostic (i.e., Any CPU) assemblies. Refer to *Deploying Windows Applications* in the *NI Measurement Studio Help* for more information on using 64-bit merge modules.

Learning Measurement Studio

As you work with Measurement Studio, you might need to consult additional resources. For detailed Measurement Studio help, including function reference and in-depth documentation on developing with Measurement Studio, refer to the *NI Measurement Studio Help* within the Visual Studio environment. The *NI Measurement Studio Help* is fully integrated with the Visual Studio help. You must have Visual Studio installed to view the online help, and you must have the Microsoft .NET Framework SDK 4.0 for Visual Studio 2010, the Microsoft .NET Framework SDK 3.5 for Visual Studio 2008, or the Framework SDK 2.0

for Visual Studio 2005 and the MSDN Help installed in order for links from Measurement Studio help topics to .NET Framework help topics to work.

You can launch the *NI Measurement Studio Help* in the following ways:

- From the Windows Start menu, select **Start»All Programs»National Instruments»<Measurement Studio>»Measurement Studio Documentation**.

- In Visual Studio 2005 and 2008, select **Help»Contents** to view the Visual Studio table of contents. In Visual Studio 2010, select **Help»View Help** to view the Visual Studio table of contents. The *NI Measurement Studio Help* is integrated into the Visual Studio help.

- In Visual Studio 2010, select **Measurement Studio» NI Measurement Studio Help**.

Note If you choose to view the Microsoft Visual Studio 2010 help online, the help viewer launches the Microsoft Developer Network (MSDN) Web site, which does not include the *NI Measurement Studio Help*. To view the Measurement Studio help, select **Start»All Programs»National Instruments»Measurement Studio 2010 for Visual Studio 2010» Measurement Studio Documentation**.

The following resources also are available to provide you with information about Measurement Studio.

- Getting Started information—Refer to the *Measurement Studio Core Overview* topic for an introduction to Measurement Studio. For a list of Measurement Studio resources, refer to the *Using the Measurement Studio Help* topic in the *NI Measurement Studio Help*.

- Examples—Measurement Studio installs examples organized by class library, depending on the component, the version of Visual Studio or the .NET Framework that the example supports, the version of Measurement Studio installed on the system, and the operating system. For more information on example locations, refer to the *Where to Find Examples* topic in the *NI Measurement Studio Help*.

- Measurement Studio Web site, `ni.com/mstudio`—Contains Measurement Studio news, support, downloads, white papers, product tutorials, and purchasing information.

- NI Developer Zone, `zone.ni.com`—Provides access to online example programs, tutorials, technical news, and Measurement Studio discussion forums.

- *Measurement Studio .NET Class Hierarchy Chart*—Provides overviews of class relationships within class libraries. Chart is included with all Measurement Studio packages and is posted online at `ni.com/manuals`.

- Review the information from the Microsoft Web site on using Visual Studio.