

RELEASE NOTES

Measurement Studio™

These release notes supplement the *Measurement Studio User Manual*. Refer to this document for information about new features and functionality, specific updates to the documentation, and resources in Measurement Studio. These release notes include information about Measurement Studio support for Visual Studio 2008, Visual Studio 2005, Visual Studio .NET 2003, and Visual Studio 6.0.

For installation instructions, installation requirements, deployment information, 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 root folder of the installation CD and are linked from the Autorun menu. After installing Measurement Studio 8.6, select **Start»All Programs»National Instruments»<Measurement Studio>>Readme** to access the Measurement Studio 8.6 Readme.



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

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



Tip The [Documentation Updates](#) section of these Release Notes details changes to the *Measurement Studio User Manual* content.

What's New in Measurement Studio 8.6

What's New in Measurement Studio 8.6 Support for Visual Studio 2008

New features in Measurement Studio 8.6 support for Visual Studio 2008 include the following. Refer to the [New Features in Measurement Studio 8.6](#) section for more information.

- Measurement Studio Visual C++ Support
- Technical Data Management Streaming (TDMS) .NET Support
- Mouse Cursor Customizability
- Additional new features
 - Instrument Driver Wizard HTML Tag Removal
 - New Properties for AutoSpacing in Graph Axes
 - Bug Fixes

What's New in Measurement Studio 8.6 Support for Visual Studio 2005

New features in Measurement Studio 8.6 support for Visual Studio 2005 include the following. Refer to the [New Features in Measurement Studio 8.6](#) section for more information.

- Technical Data Management Streaming (TDMS) .NET Support
- Mouse Cursor Customizability
- Additional new features
 - Instrument Driver Wizard HTML Tag Removal
 - New Properties for AutoSpacing in Graph Axes
 - Bug Fixes



Note Measurement Studio Visual C++ Support for Visual Studio 2005 was not rebuilt, because there were no bug fixes or features that required a rebuild.

What's New in Measurement Studio 8.6 Support for Visual Studio .NET 2003

Measurement Studio support for Visual Studio .NET 2003 is considered a legacy product. The version number for Measurement Studio support for Visual Studio .NET 2003 is 8.1.2, with the exception of the ActiveX controls. The ActiveX controls are shared between Visual Studio .NET 2003, Visual Studio 2005, and Visual Studio 2008 support and were rebuilt to fix bugs for Visual Studio 2005 and Visual Studio 2008 support.

What's New in Measurement Studio 8.6 Support for Visual Studio 6.0

Measurement Studio support for Visual Studio 6.0 is considered a legacy product. Updates to the Measurement Studio Support for Visual Studio 6.0 software, including the most recent versions of the ActiveX user interface and 3D graph controls, are available on ni.com by selecting **Support» Drivers and Updates» Software» Measurement Studio**.

New Features in Measurement Studio 8.6

Measurement Studio Visual C++ Support for Visual Studio 2008

Measurement Studio 8.6 includes Visual C++ support for Visual Studio 2008, including Visual C++ class libraries and tools that integrate into Visual Studio 2008. To use these new libraries, either create new projects in Visual Studio 2008 or use Visual Studio 2008 to upgrade your existing Visual Studio 2005 projects that use Measurement Studio support for Visual Studio 2005 libraries.



Note Measurement Studio 8.6 Visual C++ support for Visual Studio 2008 does not include the following class libraries: NI-DAQmx, NI-VISA, NI-488.2, Microsoft Excel Interface, Microsoft Word Interface, IVI class drivers, and NI-Reports. Support for NI-DAQmx, NI-VISA, and NI-488.2 will be available for download from ni.com/support in the future. If you require support for Microsoft Excel Interface, Microsoft Word Interface, IVI class drivers, or NI-Reports, contact National Instruments. Refer to *Technical Support and Professional Services* for information on how to contact National Instruments.

Technical Data Management Streaming (TDMS) .NET Support

Technical Data Management Streaming (TDMS) is a file format based on the National Instruments TDM data model used to stream data to disk. You can use the TDMS .NET class library to describe, store, and read measurement data that is optimized for high-speed data streaming and post processing. Additionally, you can use the TDMS .NET class library to create files that you can use in LabVIEW, LabWindows™/CVI™, DIAdem, and third-party industry tools, and files created by these applications can be used by the TDMS .NET class library.

For more information, refer to *Key Measurement Studio TDMS .NET Library Features* in the *NI Measurement Studio Help*.

TDM Excel Add-In

You can use the TDM Excel Add-In to load NI .tdm and .tdms files into Microsoft Excel. Use the toolbar from within Excel to choose which properties are loaded into Excel at the file, group, and channel levels, including custom properties.

Refer to NI Developer Zone, zone.ni.com, for more information about the TDM Excel Add-In.

Mouse Cursor Customizability

Different cursor images represent different interactive operations that an end user can perform on a control. For example, when editing or selecting text, you typically display an `System.Windows.Input.Cursors.IBeam` cursor, and for zooming on a graph, you typically display a magnifying lens. Now you can customize mouse cursors, at design time or programmatically, for different interactions with the Measurement Studio Windows Forms and Web Forms controls.

Additional New Features

Measurement Studio 8.6 also introduces the following new features:

- **Instrument Driver Wizard HTML Tag Removal**—When the Instrument Driver Wizard creates .NET entry points, the Instrument Driver Wizard extracts the specific documentation for each member from the function panel (.fp) file. This documentation can contain HTML entities that make it difficult to read the documentation. With this update, the Instrument Driver Wizard includes an option to remove the HTML tags from the documentation, making the documentation easier to read.
- **New Properties for AutoSpacing in Graph Axes**—You can use the `AutoSpacingMajorInterval` and `AutoSpacingMinorInterval` properties to return the value of the interval used when plotting with `AutoSpacing`.
- **Bug Fixes**—Measurement Studio 8.6 includes many fixes for previously reported bugs. Refer to the fixed bug chart in the *Measurement Studio 8.6 Readme* for more information. Select **Start» All Programs»National Instruments»<Measurement Studio>> Readme** to access the *Measurement Studio 8.6 Readme*.

Documentation Updates

The following sections describe changes to the printed *Measurement Studio User Manual* for Measurement Studio 8.5. These changes will be incorporated into future revisions of the *Measurement Studio User Manual*.

Chapter 1 Updates

Page	Text Change
1-1	Delete the last sentence of the third paragraph.
1-4	Following Step 4 of the <i>Installation Instructions</i> , insert the following note: Note: The Measurement Studio installation process includes a <code>devenv.com</code> command window that opens and closes on your desktop. Closing this window prematurely causes Measurement Studio integration features to fail to be configured properly. For example, Measurement Studio controls do not appear in the Toolbox, or the Measurement Studio New Project Wizards are not available.
1-4	Delete the <i>Installing Hardware Drivers for Visual Studio 2008 Support</i> and <i>Installing Hardware Drivers for Visual Studio 2005 Support</i> sections.

Chapter 2 Updates

Page	Text Change
2-1	Insert a new bullet before the User Interface bullet: • Technical Data Management Streaming (TDMS)
2-18	Insert the following before the User Interface heading: Technical Data Management Streaming (TDMS) .NET Support Technical Data Management Streaming (TDMS) is a file format based on the National Instruments TDM data model used to stream data to disk. You can use the TDMS .NET class library to describe, store, and read measurement data that is optimized for high-speed data streaming and post processing. Additionally, you can use the TDMS .NET class library to create files that you can use in LabVIEW, CVI, and DIAdem, and files created by these applications can be used by the TDMS .NET class library. You can use the Measurement Studio TDMS .NET class library to perform the following operations: • Read and write array data in a structured format from and to a .tdms file. • Read and write analog waveform data or digital waveform data, including timing information, from and to a .tdms file. • Using the <code>TdmsProperty</code> class, you can create custom properties for each level of the hierarchy by defining a name, data type, and value. For more information, refer to the <i>Key Measurement Studio TDMS .NET Library Features</i> topic in the <i>NI Measurement Studio Help</i>. TDM Excel Add-In You can use the TDM Excel Add-In to load NI .tdm and .tdms files into Microsoft Excel. Use the toolbar from within Excel to choose which properties are loaded into Excel at the file, group, and channel levels, including custom properties. To uninstall the TDM Excel Add-In, select Start»Control Panel»Add or Remove Programs, select National Instruments Software from the list, and click the Change/Remove button. Then select NI TDM Excel Add-in from the list, and click the Remove button. Refer to NI Developer Zone, zone.ni.com, for more information about the TDM Excel Add-In.

Page	Text Change
2-22, 2-26, 2-39, 2-43	Insert the following bullet at the end of the <i>Cursor Operations</i> section: • Create custom mouse cursors programmatically or at design time using the mouse cursor style editor.
2-24, 2-41	Insert the following bullet at the end of the <i>Additional Operations</i> section: • Create custom mouse cursors programmatically or at design time using the mouse cursor style editor.

Chapter 3 Updates

Page	Text Change
3-1	Replace the first paragraph with the following: This chapter provides overview information about the Visual C++ class libraries that are available with Measurement Studio. Measurement Studio Visual C++ support for Visual Studio .NET 2003, Visual Studio 2005, and Visual Studio 2008 is the same, except where noted. Refer to the <i>Using the Measurement Studio Visual C++ Class Libraries</i> section of the <i>NI Measurement Studio Help</i> for detailed information about these libraries.
3-1	Delete the Note following the introductory paragraph.
3-2	Insert the following at the top of the page: Note: Measurement Studio 8.6 Visual C++ support for Visual Studio 2008 does not include the following class libraries: NI-DAQmx, NI-VISA, NI-488.2, Microsoft Excel Interface, Microsoft Word Interface, IVI class drivers, and NI-Reports. Support for NI-DAQmx, NI-VISA, and NI-488.2 will be available at a later time. Refer to <i>Drivers and Updates</i> on ni.com to determine when they will be available. If you require support for Microsoft Excel Interface, Microsoft Word Interface, IVI class drivers, or NI-Reports, contact National Instruments. Refer to <i>Technical Support and Professional Services</i> in the <i>NI Measurement Studio Help</i> for information on how to contact National Instruments.

Chapter 4 Updates

Page	Text Change
4-4	Replace the last two bullets in the <i>Creating a Measurement Studio Project</i> section with the following: • Measurement Studio Visual C++ project • Measurement Studio Visual C++ project with LabWindows/CVI libraries
4-9	Remove the Note that appears immediately after the <i>Creating NI-DAQmx User Code in Visual C++</i> heading.

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 1.1 for Visual Studio .NET 2003, the Microsoft .NET Framework SDK 2.0 for Visual Studio 2005, or the Microsoft .NET Framework SDK 3.5 for Visual Studio 2008 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**. The help launches in a stand-alone help viewer.
- From Visual Studio, select **Help»Contents** to view the Visual Studio table of contents. The *NI Measurement Studio Help* is listed in the table of contents.
- From Visual Studio, select **Measurement Studio»NI Measurement Studio Help**. The help launches within the application.

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 and the *Getting Started with the Measurement Studio Class Libraries* section in the *NI Measurement Studio Help* for an introduction to Measurement Studio and for walkthroughs that guide you step-by-step in learning how to develop Measurement Studio applications. For an introduction to 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 where you can participate in discussion forums for Visual Basic 6.0, Visual C++, and .NET Languages.
- *Measurement Studio .NET Class Hierarchy Chart* and *Measurement Studio Visual C++ Class Hierarchy Chart*—Provide overviews of class relationships within class libraries. Charts are included with all Measurement Studio packages and are posted online at ni.com/manuals.
- Review the information from the Microsoft Web site on using Visual Studio.

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