

RELEASE AND UPGRADE NOTES

LabVIEW™ Real-Time Module

Version 2012

This document provides system requirements, installation instructions, descriptions of new features, and information about upgrade and compatibility issues for the LabVIEW 2012 Real-Time Module.

Refer to the *Getting Started with the LabVIEW Real-Time Module* manual for exercises you can complete to familiarize yourself with the Real-Time Module.



Tip Refer to the **Real-Time Module Best Practices** book in the *LabVIEW Help* for programming recommendations on designing, developing, and deploying applications with the LabVIEW Real-Time Module. Select **Real-Time Module» Real-Time Module Best Practices** on the **Contents** tab of the *LabVIEW Help* to display this book.

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System Requirements

The following section describes the system requirements to run the LabVIEW 2012 Real-Time Module. The Real-Time Module system requirements are in addition to the LabVIEW system requirements listed in the *LabVIEW Readme*.

The host computer must meet the following specifications.

- LabVIEW 2012 Full or Professional Development System (32-bit)
- At least 200 MB of disk space in addition to the LabVIEW-recommended minimum.
- RT target hardware and driver software.
- One of the following operating systems:
 - Windows 7 (32-bit)
 - Windows 7 (64-bit with 32-bit LabVIEW installed)
 - Windows Server 2003 R2 (32-bit)
 - Windows Server 2008 R2 (64-bit with 32-bit LabVIEW installed)
 - Windows Vista (32-bit)
 - Windows Vista (64-bit with 32-bit LabVIEW installed)
 - Windows XP Pro (Service Pack 3)



Note You might need more memory than the LabVIEW-recommended minimum depending on the size of the application you design in LabVIEW on the host computer.

Installing the Real-Time Module 2012

Complete the following steps to install LabVIEW and the Real-Time Module on a development computer.

1. Log in to the development computer as an administrator or as a user with administrative privileges.
2. Insert the LabVIEW Platform DVD 1.



Note To request additional LabVIEW 2012 Platform DVDs, refer to the National Instruments Web site. If you purchased this product with an NI Software Suite or NI Product Bundle, use the installation media that shipped with your purchase to install this product.

3. Follow the instructions on the screen to install and activate the following software.
 - LabVIEW
 - Real-Time Module
 - PID and Fuzzy Logic Toolkit
 - Device Drivers



Note Refer to your hardware-specific documentation for information about installing the appropriate device drivers.

Activating the Real-Time Module

The Real-Time Module relies on licensing activation. When the evaluation period expires, you must activate a valid Real-Time Module license to continue using the Real-Time Module. You must create an ni.com User Profile to activate your software.

You can use the NI License Manager, available by selecting **Start»All Programs»National Instruments»NI License Manager**, to activate National Instruments products. Refer to the *National Instruments License Manager Help*, available by selecting **Help»Contents** in the NI License Manager, for information about activating NI products.

Configuring Real-Time Targets

Use Measurement & Automation Explorer (MAX) to configure RT targets and to install software and drivers on targets. You can install MAX from the LabVIEW Platform DVD.

- **Networked RT Targets**—Refer to the **MAX Remote Systems Help** book in the *Measurement & Automation Explorer Help*, available by selecting **Help»MAX Help** from MAX, for information about configuring networked RT targets.
- **Desktop PC Targets**—Refer to the *Using Desktop PCs as RT Targets with the LabVIEW Real-Time Module* document for information about configuring a desktop PC as a networked RT target. Select **Start»All Programs»National Instruments»LabVIEW 2012»LabVIEW Manuals** and then double-click `RT_Using_PC_as_RT_Target.pdf` to open the document.



Note When NI Web-Based Monitoring and Configuration is installed on an RT target, you can use a Web browser to perform common monitoring and configuration tasks on the target. Refer to the **Fundamentals»Working with Projects and Targets»How-To»Monitoring and Configuring a Remote Device from a Web Browser** topic on the **Contents** tab in the *LabVIEW Help* for information about web-based monitoring and configuration.

Real-Time Module 2012 Features

The Real-Time Module 2012 includes the following new features. Refer to the *LabVIEW Help*, available by selecting **Help»LabVIEW Help**, for information about these features.

Performance Improvements from Disconnected Unused Inline SubVIs

To improve the load time and reduce memory usage of stand-alone applications, source distributions, and Web services that include inline subVIs, place a checkmark in the **Disconnect unused inline subVIs** checkbox on the **Additional Exclusions** page of the build specification. This checkbox prevents LabVIEW from loading unused inline subVIs into memory when you load the resulting build application. LabVIEW considers an inline subVI to be unused if VIs within the build only call the subVI statically via the subVI node.

Real-Time Execution Trace Toolkit

The LabVIEW Real-Time Module includes a 30-day evaluation of the Real-Time Execution Trace Toolkit. The Real-Time Execution Trace Toolkit includes the Real-Time Execution Trace Tool and the Execution Trace Tool VIs. You can use the Execution Trace Tool VIs to capture the timing and execution data of VI and thread events for applications running on an RT target. The Real-Time Execution Trace Tool displays the timing and event data, or trace session, on the host computer. In LabVIEW, select **Tools»Real-Time Module»Execution Trace Tool** to display the Real-Time Execution Trace Tool.

Refer to the **Real-Time Execution Trace Toolkit** book in the *LabVIEW Help* for information about using the Real-Time Execution Trace Toolkit to debug real-time applications. Select **Help»LabVIEW Help** to display the *LabVIEW Help*. In the *LabVIEW Help*, browse to **Toolkits»Real-Time Execution Trace Toolkit** to view the **Real-Time Execution Trace Toolkit** book.

Activating the Real-Time Execution Trace Toolkit

The Real-Time Execution Trace Toolkit relies on licensing activation. You have a temporary license for a 30-day evaluation period. When the evaluation period expires, you must activate a valid Real-Time Execution Trace Toolkit license to continue using the Real-Time Execution Trace Toolkit.

You can use the NI License Manager, available by selecting **Start»All Programs»National Instruments»NI License Manager**, to activate National Instruments products. Refer to the *National Instruments License Manager Help*, available by selecting **Help»Contents** in the NI License Manager, for information about activating NI products.

Upgrade and Compatibility Issues

You might encounter the following compatibility issue when upgrading to the Real-Time Module 2012 from the Real-Time Module 2011. Refer to previous versions of the *LabVIEW Real-Time Module Release and Upgrade Notes*, available on ni.com, for changes in previous versions of the Real-Time Module.

RT Utility VIs Removed from Desktop Environment

The RT Utility VIs for the desktop environment are replaced by the System Configuration VIs, which also install with the LabVIEW Real-Time Module. Refer to the National Instruments Web site at ni.com/info and enter the Info Code `RT_Utility_Replace` to access a list of replacements for these VIs.

FTP VIs Moved to LabVIEW

The **FTP** palette no longer installs with the Real-Time Module. This palette now installs with the LabVIEW Base Development System, and it appears on the **Protocols VIs and Functions** palette.

Known Issues with the Real-Time Module 2012

Refer to the National Instruments Web site at ni.com/info and enter the Info Code LVRT2012KIL to access the known issues for the Real-Time Module.

Where to Go from Here

National Instruments provides many resources to help you succeed with your NI products. Use the following resources as you start exploring LabVIEW and the Real-Time Module.

Related Documentation and Examples

Use the following resources to learn more about using LabVIEW and the Real-Time Module.

- **LabVIEW Help**—Available by selecting **Help»LabVIEW Help** in LabVIEW. Browse the **Real-Time Module** book in the **Contents** tab for an overview of the Real-Time Module.
- **Context Help Window**—Available by selecting **Help»Show Context Help**. Context help provides brief descriptions of VIs, functions, and dialog boxes. Context help for most VIs and functions include a link to the complete reference for a VI or function.
- **Hardware-Specific Documentation**—Some RT targets provide printed documentation as well as content in the *LabVIEW Help*. Use the hardware documentation for information about using the RT target with LabVIEW and for information about hardware specifications.
- **Examples**—Use the NI Example Finder, available by selecting **Help»Find Examples** from LabVIEW, to browse or search for RT example VIs. You also can access example VIs from the `labview\examples\real-time` directory.

NI Web Site

Refer to ni.com/info and enter the Info Code `rtinfo` for the latest NI Developer Zone articles, examples, and support information for the Real-Time Module.

Refer to ni.com/info and enter the Info Code `rttrn` to access online training for the Real-Time Module.

Support

The National Instruments Web site is your complete resource for technical support. At ni.com/support you have access to everything from troubleshooting and application development self-help resources to email and phone assistance from NI Application Engineers.

National Instruments corporate headquarters is located at 11500 North Mopac Expressway, Austin, Texas, 78759-3504. National Instruments also has offices located around the world to help address your support needs. For telephone support in the United States, create your service request at ni.com/support and follow the calling instructions or dial 512 795 8248. For telephone support outside the United States, visit the Worldwide Offices section of 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.

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