

RELEASE NOTES

NI-IMAQ™ for IEEE 1394 Cameras

Version 2.0

NI-IMAQ for IEEE 1394 Cameras is the National Instruments image acquisition software for IEEE 1394 cameras.

These release notes describe how to install the NI-IMAQ for IEEE 1394 Cameras software. Refer to the `readme.rtf` file for the most up-to-date information about this release of NI-IMAQ for IEEE 1394 Cameras. The `readme.rtf` file is installed with NI-IMAQ for IEEE 1394 Cameras and is also available on the installation CD.

If you are using NI-IMAQ for IEEE 1394 Cameras with a National Instruments CVS-1450 Series compact vision system, refer to the *Compact Vision System Considerations* section of this document.

New Features in NI-IMAQ for IEEE 1394 Cameras 2.0

This release of NI-IMAQ for IEEE 1394 Cameras includes the following features:

- Bayer color decoding—Supports automatic Bayer color decoding with no additional programming.
- Broadcast capabilities—Allows for multiple host computers to acquire images from a single camera, thus effectively distributing computations.
- FLIR Systems support—Allows for thermal imaging with IEEE 1394 FLIR ThermoVision cameras.
- Inline color conversion—Uses advanced instruction sets to decode YUV to RGB. Faster and more accurate than NI-IMAQ for IEEE 1394 Cameras 1.5.
- Updated LabVIEW support—Improves ease-of-use with property nodes. Enhances thread-scheduling between device drivers.
- IIDC 1.31 support—Enhanced version of IIDC 1.30 that supports IEEE 1394b-2002 compliant transfer, new video modes, and new camera features.
- Enhanced Windows support—Provides greater stability and performance.



Note Refer to the `readme.rtf` file for information about upgrading from NI-IMAQ for IEEE 1394 Cameras 1.x.

Minimum System Requirements

The development computer must meet the following minimum system requirements to run NI-IMAQ for IEEE 1394 Cameras.

- 750 MHz Pentium III-class processor
- 256 MB RAM
- 300 MB of free hard disk space
- 1,024 × 768 resolution video adapter and monitor

Software Components

The NI-IMAQ for IEEE 1394 Cameras software kit contains the following components:

- NI-IMAQ for IEEE 1394 Cameras device driver software
- NI-IMAQ for IEEE 1394 Cameras user libraries
- NI-IMAQ for IEEE 1394 Cameras sample code
- Support files for CVS-1450 devices
- National Instruments Measurement & Automation Explorer (MAX)
- Online documentation

Software Support

NI-IMAQ for IEEE 1394 Cameras supports the following operating systems:

- LabVIEW Real-Time Module 7.0 or later
- Windows 2000/XP

NI-IMAQ for IEEE 1394 Cameras supports the following application development environments (ADEs):

- LabVIEW Real-Time Module 7.0 or later
- LabVIEW 7.0 or later
- LabWindows™/CVI™ 6.0 or later
- Visual Basic 6.0 or later
- Visual C++ 6.0 or later
- Visual Studio .NET 2003 or later

You can also use NI-IMAQ for IEEE 1394 Cameras with NI Vision Builder for Automated Inspection (Vision Builder AI) version 2.5 or later to prototype, benchmark, and deploy your applications.

Compact Vision System Considerations

The following sections provide specific information about updating your software for use with your CVS-1450 device.

Vision Builder for Automated Inspection

If you are using Vision Builder AI with your CVS-1450 device, you must have Vision Builder AI 2.5 or later. If you have Vision Builder AI 2.0 installed, go to ni.com/support, and click the **Drivers and Updates** link to find and install the latest downloadable update. Without this support, you cannot configure the CVS-1450 device. Refer to your Vision Builder AI `readme.txt` file for additional information about this update.

LabVIEW Real-Time Module

If you previously used the LabVIEW Real-Time Module 7.0 to program your CVS-1450 device, and you upgrade to the LabVIEW Real-Time Module 7.1, any VIs that use the digital I/O functionality of the CVS-1450 device may have a broken run arrow.

To correct this problem, select **Tools»FPGA Interface Update Utility** from the front panel or block diagram of the VIs. This utility restores the VIs by updating the **HW Exec Ref** and **HW Exec Ref Out** parameters in the VIs and any subVIs. Run this utility for each VI you created with the LabVIEW Real-Time Module 7.0. Refer to the *FPGA Interface* section of *LabVIEW Help* for more information about the **HW Exec Ref** and **HW Exec Ref Out** parameters.



Note You must have NI-IMAQ for IEEE 1394 Cameras version 2.0 installed to access the FPGA Interface Update Utility.

After you have updated the NI-IMAQ for IEEE 1394 Cameras software on your host computer, you must also update the software on your LabVIEW RT target. Refer to *Getting Started with NI-IMAQ for IEEE 1394 Cameras* for information about updating software on your LabVIEW RT target.

Installation Procedures

Insert the NI-IMAQ for IEEE 1394 Cameras CD into your drive to launch the autorun screen.



Note If you are using a previous version of NI-IMAQ for IEEE 1394 Cameras, National Instruments recommends that you uninstall the older version first.



Note If you are running Windows XP or Windows 2000, you must have administrator access to perform the installation.

Click **Install NI-IMAQ for IEEE 1394 Cameras 2.0** to launch the NI-IMAQ for IEEE 1394 Cameras 2.0 installer, and follow the instructions on the installation screens.

Camera Configuration

If you are using a CVS-1450 device with Vision Builder for AI, refer to the Vision Builder AI documentation for camera configuration information.

NI-IMAQ for IEEE 1394 Cameras 2.0 integrates with MAX, the National Instruments utility for configuring and testing your measurement and automation system.

An icon for MAX appears on your desktop after you install NI-IMAQ for IEEE 1394 Cameras 2.0. Double-click this icon to run the utility. You also can use MAX to configure other National Instruments hardware, such as data acquisition (DAQ) or GPIB devices.

Instructions for configuring an IMAQ IEEE 1394 device are included in *MAX Help for NI-IMAQ for IEEE 1394 Cameras*. You can access this help file from the **MAX Help** menu.

Using the Online Help

The NI-IMAQ for IEEE 1394 Cameras 2.0 software online help and PDF documentation is installed onto your hard drive with the NI-IMAQ for IEEE 1394 Cameras 2.0 software.

To view the online help, select **Start»Programs»National Instruments»Vision»Documentation**, and choose the appropriate document. You can access the *NI-IMAQ for IEEE 1394 VI Reference Help* from the LabVIEW **Help** menu.



Note You must have Adobe Acrobat Reader with Search and Accessibility 5.0.5 or later installed to view the PDFs. Refer to the Adobe Systems Incorporated Web site at www.adobe.com to download Acrobat Reader.

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