Getting Started with NI-IMAQ™ for IEEE 1394 Cameras

Version 1.5.1

NI-IMAQ for IEEE 1394 Cameras provides driver support for Windows 2000/XP/Me/98 as well as LabVIEW Real-Time (RT) targets. The following sections describe how to start using NI-IMAQ for IEEE 1394 Cameras with your IEEE 1394 adapter card.

Installing the IEEE 1394 Hardware

Begin by installing the IEEE 1394 adapter card. If you are using a third-party adapter, follow the manufacturer's installation instructions and then refer to the *Installing Your Driver Software* section of this document. If you are using an NI PXI-8252 device, refer to the following instructions.

What You Need to Get Started

To set up and use the NI PXI-8252, you need the following items:

❑ PXI-8252 device

❑ Number 1 Phillips screwdriver

Installing the PXI-8252

Complete the following steps to install the PXI-8252.

1. Shut down the operating system and power off the computer.

2. Seat the PXI-8252 firmly in any slot of the PXI chassis, other than Slot 1.

3. Use the number 1 Phillips screwdriver to tighten the top and bottom screws which secure the PXI-8252 in place.
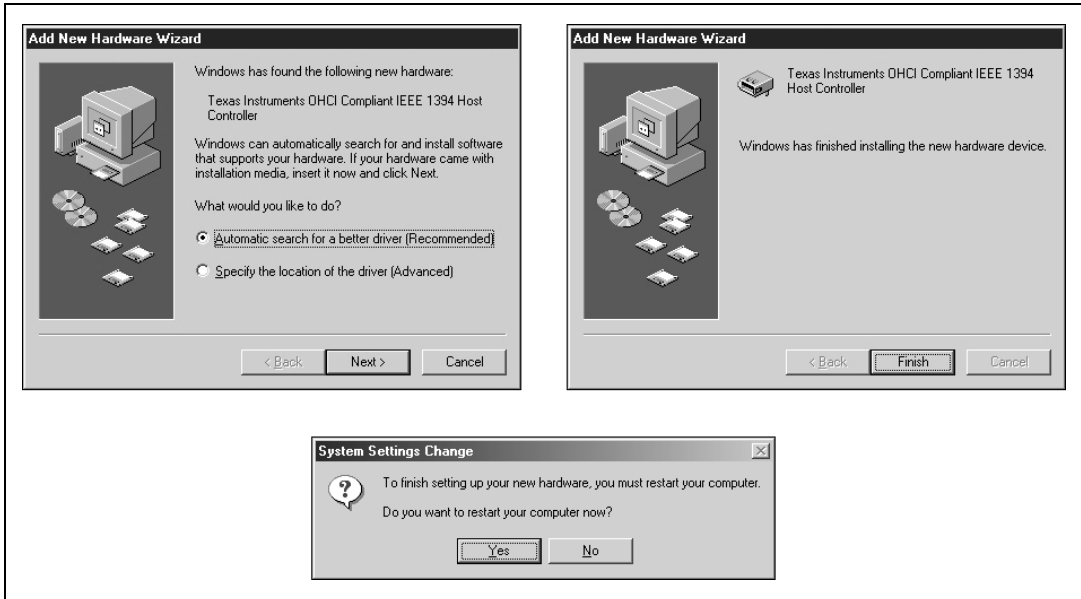
4. Power on the system.

Depending on the operating system you are using, you may be prompted to answer a few questions. Refer to the following sections for assistance.

NATIONAL INSTRUMENTS™

Windows 2000/XP

Windows 2000/XP automatically detects the new card and installs the OHCI drivers. You may be prompted for the original Windows 2000/XP installation CD.
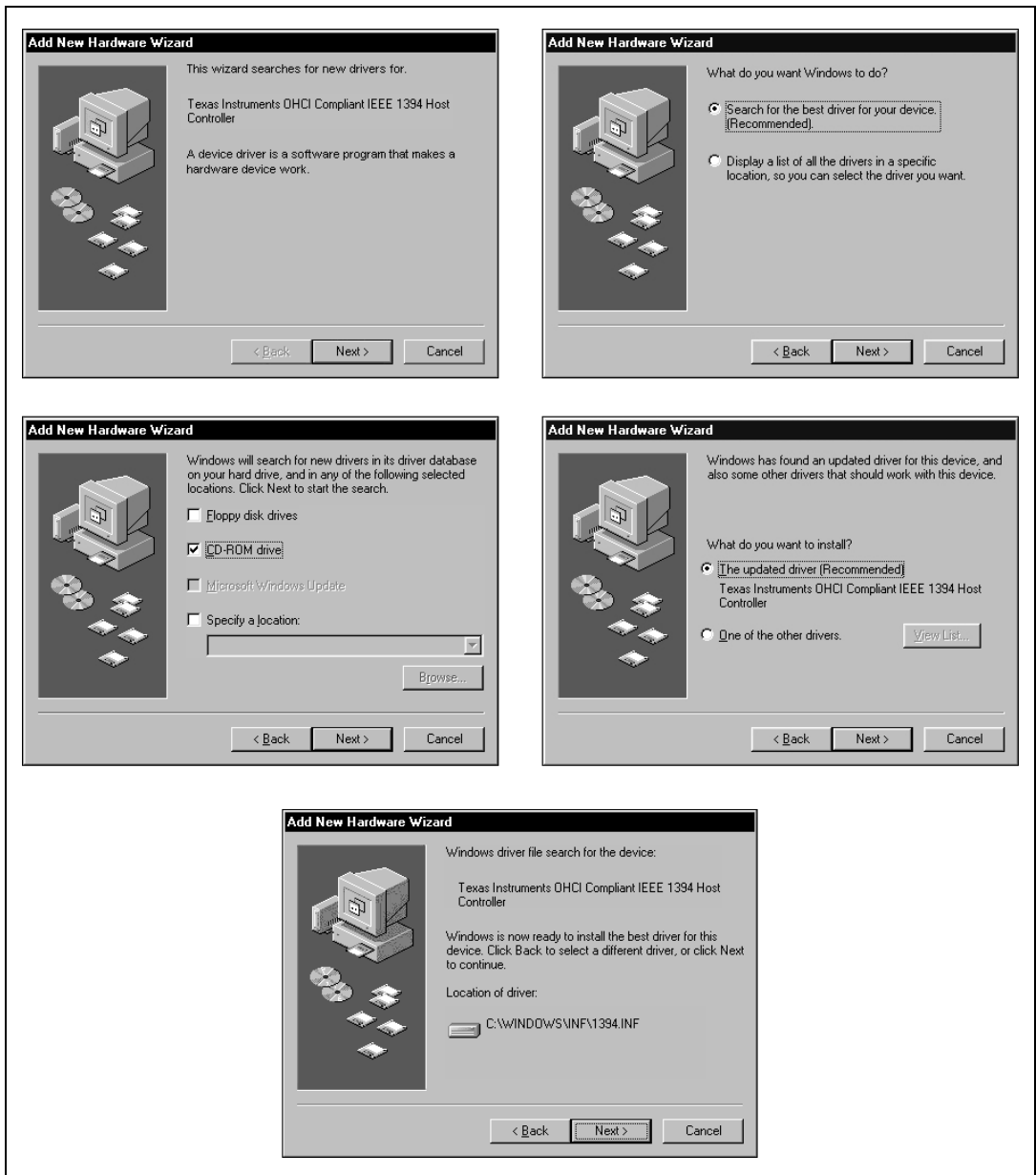
Windows Me

Windows Me automatically detects the new hardware and launches the **Add New Hardware Wizard**. Choose the **Recommended** options when given a choice.
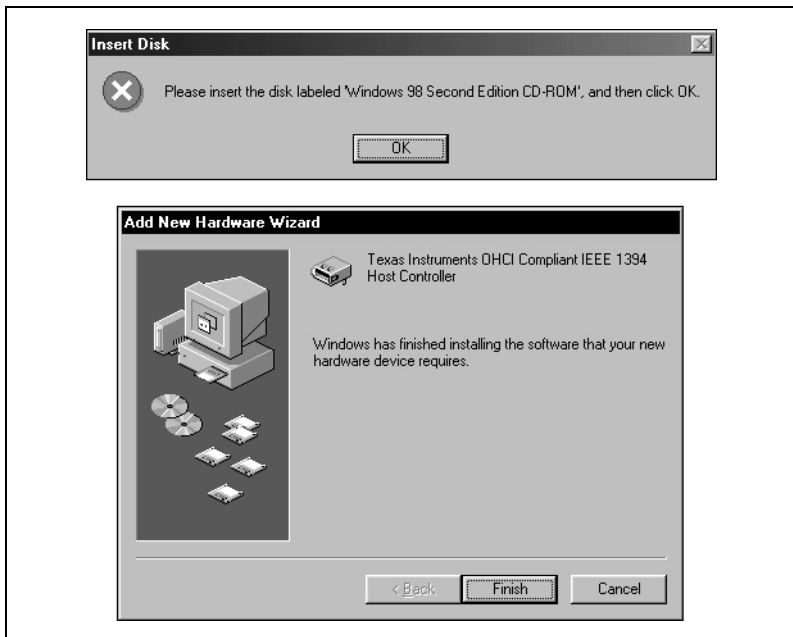

Windows 98

Windows automatically detects the new hardware and launches the **Add New Hardware Wizard**. Choose the **Recommended** options when given a choice.

Add New Hardware Wizard

This wizard searches for new drivers for.

Texas Instruments OHCI Compliant IEEE 1394 Host Controller

A device driver is a software program that makes a hardware device work.

< Back   Next >   Cancel

Add New Hardware Wizard

What do you want Windows to do?

○ Search for the best driver for your device. (Recommended).

○ Display a list of all the drivers in a specific location, so you can select the driver you want.

< Back   Next >   Cancel

Add New Hardware Wizard

Windows will search for new drivers in its driver database on your hard drive, and in any of the following selected locations. Click Next to start the search.

☐ Floppy disk drives

☑ CD-ROM drive

☐ Microsoft Windows Update

☐ Specify a location:

Browse...

< Back   Next >   Cancel

Add New Hardware Wizard

Windows has found an updated driver for this device, and also some other drivers that should work with this device.

What do you want to install?

○ The updated driver (Recommended)
Texas Instruments OHCI Compliant IEEE 1394 Host Controller

○ One of the other drivers.   View List...

< Back   Next >   Cancel

Add New Hardware Wizard

Windows driver file search for the device:

Texas Instruments OHCI Compliant IEEE 1394 Host Controller

Windows is now ready to install the best driver for this device. Click Back to select a different driver, or click Next to continue.

Location of driver:

C:\WINDOWS\INF\1394.INF

< Back   Next >   Cancel

Tip If Windows launches a dialog box indicating it cannot locate a file on the Windows 98 CD, insert the Windows 98 installation CD and instruct Windows to copy files from either the top directory or the win98 directory of the CD-ROM drive (typically d:\ or d:\win98\).

LabVIEW Real-Time

LabVIEW RT PXI systems do not prompt you at this time.
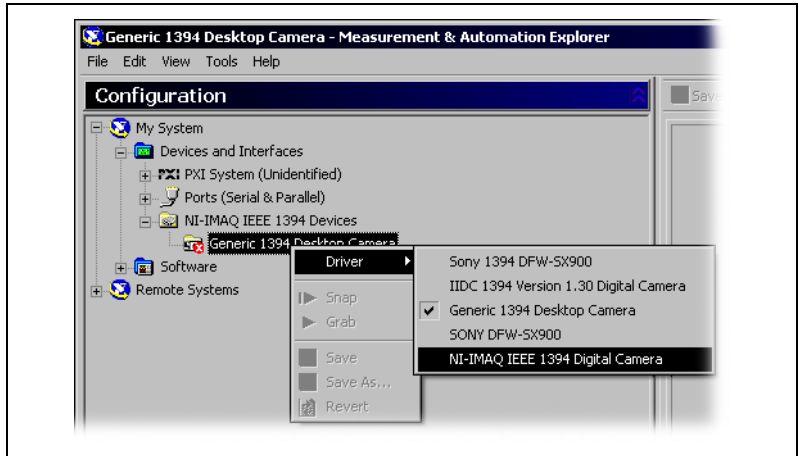
Installing Your Driver Software

Windows 2000/XP/Me/98

If you are using Windows 2000/XP/Me/98, complete the following steps to get started using NI-IMAQ for IEEE 1394 Cameras.

1. Disconnect all IEEE 1394 cameras.

2. Install the NI-IMAQ for IEEE 1394 Cameras software.

3. Connect your camera.

4. Run Measurement & Automation Explorer (MAX).

   a. Double-click the MAX icon on your desktop. You can use MAX to modify camera properties. Once you have saved these properties, they become your default settings for all NI-IMAQ for IEEE 1394 Cameras or IMAQ Vision applications.

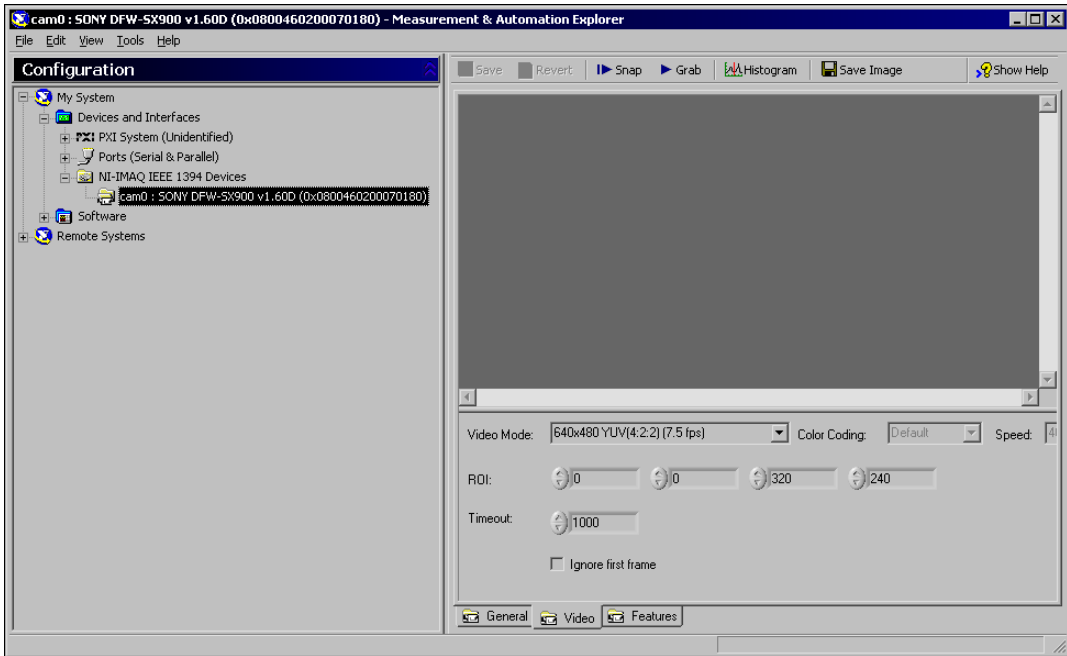   b. Click the plus sign next to Devices and Interfaces to display a list of your installed IEEE 1394 IMAQ devices.

c. If your camera does not show up as a NI-IMAQ IEEE 1394 digital camera, switch the driver by right-clicking the camera and selecting **Driver»NI-IMAQ IEEE 1394 Digital Camera**, as shown in Figure 1.

Figure 1. Switching the Camera Driver

d. Select the camera from the menu. You can then view or modify the camera features from the **Properties Panel** located below the image viewer, as shown in Figure 2.

Figure 2. Setting the Camera Properties

💡 **Tip** Click **Show Help** to display the help window on the right side of the image viewer. Move your mouse over the properties to view context-sensitive help in the bottom half of the help window.
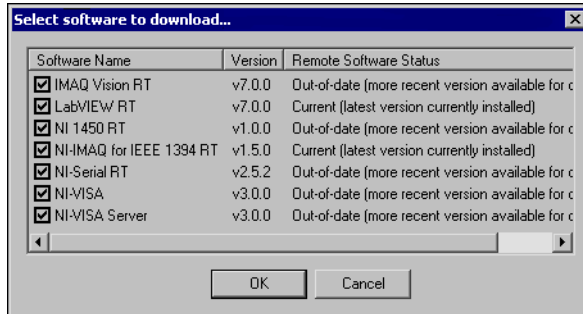
LabVIEW Real-Time

If you are using a Windows development machine and a LabVIEW RT target, complete the following steps to get started using NI-IMAQ for IEEE 1394 Cameras:

1. Install the NI-IMAQ for IEEE 1394 Cameras software on your Windows development machine.

2. Run Measurement & Automation Explorer (MAX).

   a. Double-click the MAX icon on your desktop. You can use MAX to modify camera properties. Once you have saved these properties, they become your default settings for all NI-IMAQ for IEEE 1394 Cameras or IMAQ Vision applications.

   b. Click the plus sign next to **Remote Systems**. Your LabVIEW RT target should appear in the list if the target is connected to the same subnet as your host machine.
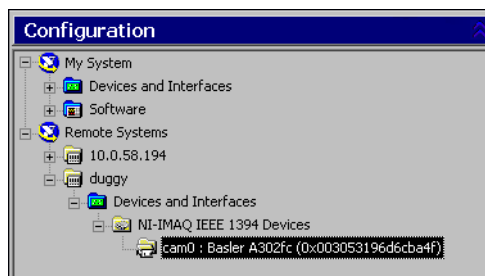
c. Configure your network settings by selecting **Help»Remote Systems** and following the instructions found in the *MAX Remote Systems Help*.

d. From the Software tab, click **Install Software**. Select **NI-IMAQ for IEEE 1394 RT**, as well as any additional software you would like to install on the target machine, as shown in Figure 3.

e. Click **OK**.

Figure 3. Selecting Software for the Target Machine

MAX downloads the software to the target machine and prompts you to restart the remote device.

f. Click **OK**.

g. Connect your camera to your remote system.

h. Restart your remote system and wait for the system to reconnect.

i. Press the <F5> key to refresh the MAX configuration tree. Your IEEE 1394 camera should be listed in the Remote Systems tree, as shown in Figure 4.

Figure 4. Viewing the Camera on the Remote System

Acquiring Images

1. Click **Snap** on the toolbar to acquire your first image.

2. Click **Grab** on the toolbar to acquire images continuously. This type of acquisition allows you to focus your camera.

3. Click **Save Image** on the toolbar to save the image.