

WHERE TO START WITH YOUR NI 5431 PXI™/PCI-BASED VIDEO WAVEFORM GENERATOR

This document explains how to set up, test, and begin using your NI 5431.

You can control the NI 5431 interactively with the VideoGen-Wizard soft front panel software, or you can control it programmatically with an Application Development Environment (ADE) using the supplied NI-FGEN Interchangeable Virtual Instrument (IVI) driver. The supported ADEs include LabVIEW, LabWindows/CVI, Visual Basic, and any other C or C++ environment.

Install Your Software

Use the following procedure to set up the software for your NI 5431:

1. If you are using an ADE or third-party tool, make sure that it is installed.
2. Insert your National Instruments Video Generator software CD into your CD-ROM drive. Click on the **Install** option in the installation window that appears.
3. To install the instrument driver, ADE examples, and VideoGen-Wizard soft front panel, choose the **Programmatic and Interactive Support** option. To install only the VideoGen-Wizard soft front panel, choose the **Interactive Support Only** option.

The software installation is complete.

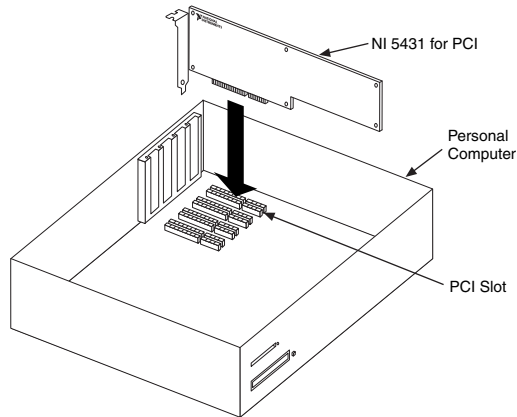
Install Your Hardware

Install your NI 5431 hardware as shown in the following illustrations.

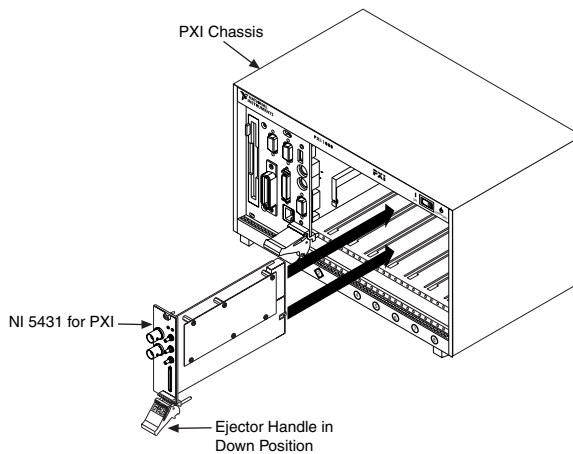


Caution You must turn off your PC or chassis before installing your NI 5431. To prevent damage due to electrostatic discharge or contamination, handle the board using the edges or the metal bracket.

◆ NI 5431 (PCI)



◆ NI 5431 (PXI)



Configure Your NI 5431

To configure and test your NI 5431, double-click on the **Measurement & Automation** icon on your computer desktop and follow these steps:

1. Double-click on the **Devices and Interfaces** icon to open a list of recognized devices.
2. Find the device in the list that corresponds to your NI 5431. Note the device number to which your device has been assigned. You will need to use this device number when you program your device.
3. Right-click on the device and select **Properties** from the pop-up menu.
4. From the Properties window, click on the **Test Resources** button to test the NI 5431 resources. A dialog box appears and indicates if the resource test has passed. If the test does not pass, verify that the board is plugged in properly. If the test still fails, contact National Instruments for support.
5. Click on **Run Test Panels** to run the functional test panels and begin using your NI 5431. Connect a signal to your NI 5431 and select the appropriate output waveform type, frequency, and amplitude level.



Caution Do not set the output voltage level for your NI 5431 to more than $\pm 1 V_{pk-pk}$ into 75Ω , as this may damage your video display device or your device under test (DUT). Always check the output levels before connecting a DUT to your NI 5431. National Instruments is not responsible for any damage caused to your DUT.

6. Click on **Close** when you finish testing your NI 5431. Click on **OK** from the Properties window.

You have successfully installed and configured the necessary software and hardware to use your NI 5431 with the NI-FGEN software.

Program Your NI 5431

To use the VideoGen-Wizard soft front panel to control your NI 5431, select **Start»Programs»National Instruments VideoGen»VideoGen-Wizard**.

To control your NI 5431 programmatically using your ADE, use the supplied NI-FGEN instrument driver. Refer to the National Instruments FGEN Help file in the **Start»Programs»National Instruments FGEN** menu for information on NI-FGEN.