WHERE TO START WITH YOUR NI 4350

The following sections explain how to begin using your National Instruments 4350 temperature and voltage measurement instrument. The NI 4350 products include instruments for ISA, PCMCIA, and USB buses. You may have software that refers to these devices as PC-4350, DAQCard-4350, and DAQPad-4350, respectively.

Set up and Test

Use the following instructions to set up and test your NI 4350.

1. Install VirtualBench-Logger and VirtualBench-DIO.

    This software is included in your NI 4350 kit so that you can interactively use your NI 4350 as a standalone data logger. However, this is only one of your options. If you prefer to program your NI 4350 for a specific application, see the *Programming Options* section in this document.

    a. Insert your VirtualBench CD into your CD-ROM drive. Click on the **Install VirtualBench** option from the installation window. When asked to select your **VirtualBench Setup Options**, select **4350 Datalogger**.

    b. Complete the installation by following the instructions that appear in the dialog boxes.

2. Install NI-DAQ.

    a. Insert your NI-DAQ CD into your CD-ROM drive. Click on the **Install NI-DAQ** option from the installation window. Select the **NI-DAQ Driver Files** and **VirtualBench** checkboxes from the **Select Components** installation screen.

   b. Complete the installation by following the instructions that appear in the dialog boxes.

For more information on installing VirtualBench, refer to *Getting Started with VirtualBench*.

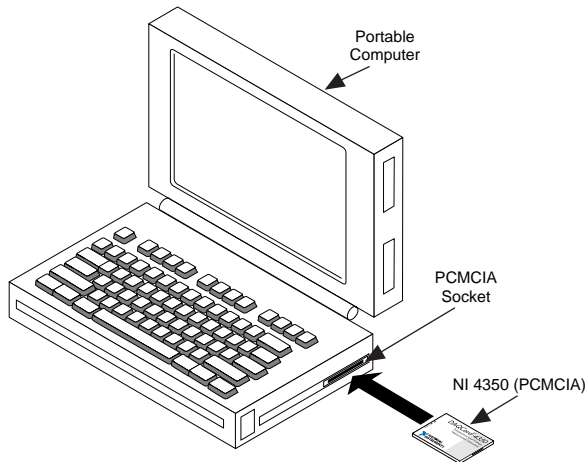3. Install your NI 4350 instrument. The following figures illustrate the NI 4350 hardware installation.

⚠ **Caution** *You must turn off your PC or chassis before installing your NI 4350 (ISA). To prevent damage due to ESD or contamination, handle the board using the edges or the metal bracket.*
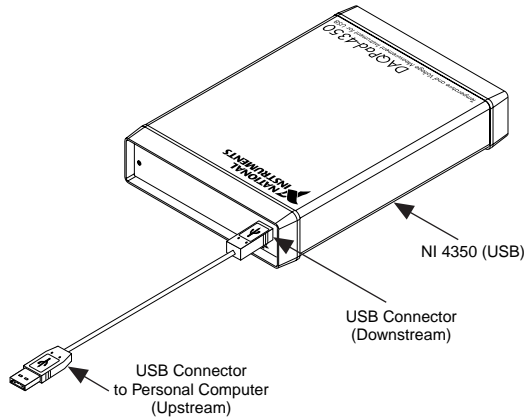
♦ **NI 4350 (ISA)**
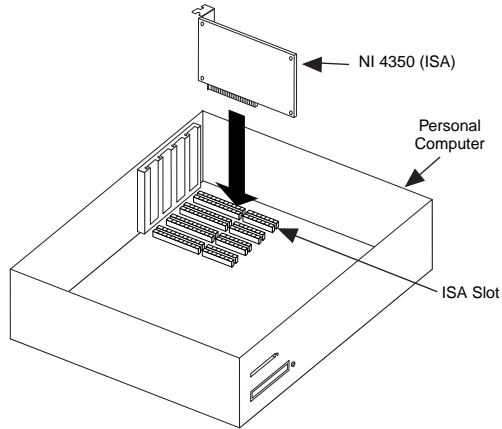
♦ **NI 4350 (PCMCIA)**

For more information on hardware installation, refer to the *NI 4350 User Manual*.

♦ **NI 4350 (USB)**

4. Run the NI-DAQ Configuration Utility to configure and test your NI 4350. (If you need help during the configuration and testing process, open the NI-DAQ Configuration Utility help file by selecting **Help Topics** from the **Help** menu.)

   a. Open the NI-DAQ Configuration Utility from the **Start»Programs»NI-DAQ for Windows** menu.

   b. The NI-DAQ configuration utility detects the NI 4350 you installed and the **Found New NI-DAQ Hardware** dialog box opens. Click on **Yes** to use this instrument in your configuration.

   c. In the **System** window, assign a device number to your NI 4350. You will use this device number to access your NI 4350 from software applications. Click on **Next**.

   d. In the **Accessory** window, select an accessory to attach to your instrument. Click on **Finish** and your NI 4350 appears in the **NI-DAQ Devices** list with the assigned device number.

   e. Highlight your NI 4350 instrument in the **NI-DAQ Devices** list and click on the **Configure** button.

   f. From the **Configuring Device** window, click on the **Test Resources** button. A dialog box appears and indicates if the resource test has passed.

   g. Click on **Run Test Panels...** to run the functional test panels and begin using your NI 4350. Connect your signal to an input channel on your attached accessory and select your **Channel**, **Input Limit**, and **Sensor Type** settings according to your sensor or signal. If your sensor type is a thermocouple, select the correct option in **CJC Info**. The NI 4350 immediately starts to acquire data.

h. Click on **Close** from the **Test Panel** window when you finish
       testing your NI 4350. Select **OK** from the **Configuring
       Devices** window.

   i. Select the **Exit** option in the NI-DAQ configuration utility **File**
       menu to exit the configuration utility. You have successfully
       installed and configured the necessary software and hardware
       to use your NI 4350.

5. Select the **Save** option in the NI-DAQ Configuration Utility **File** menu
   to save your NI 4350 configuration settings.

6. Launch VirtualBench-Logger or VirtualBench-DIO. Open
   VirtualBench-Logger or VirtualBench-DIO from the
   Start»Programs»VirtualBench menu to use your NI 4350 as a
   standalone data logger.

Programming Options

You can control the NI 4350 instrument programmatically for custom
applications. The NI 4350 is supplied with an easy-to-use instrument driver
that controls many common functions from an Application Development
Environment (ADE). The supported ADEs include LabVIEW,
LabWindows/CVI and other C or C++ environments, and Visual Basic.

Use the following instructions to set up your NI 4350 programming option.

1. Install your ADE, if you have not already done so.

2. If applicable, install the instrument driver software from disk 1 of the
   NI435X disk set in your kit.

3. Refer to the 435XHelp file in the **Start»Programs»Ni435x** menu for
   more information on programming your NI 4350 with the instrument
   driver.

For more information on programming options, refer to the *NI 4350 User
Manual*.