



# NATIONAL INSTRUMENTS PXI-8170 PXI Controller User Guide

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## NOTE TO USERS USING THE PXI™ -8150B AND PXI-8170 SERIES CONTROLLERS IN THE PXI-1020 CHASSIS

This document describes how to set up your PXI-8150B or PXI-8170 series controller card in a PXI-1020 chassis.

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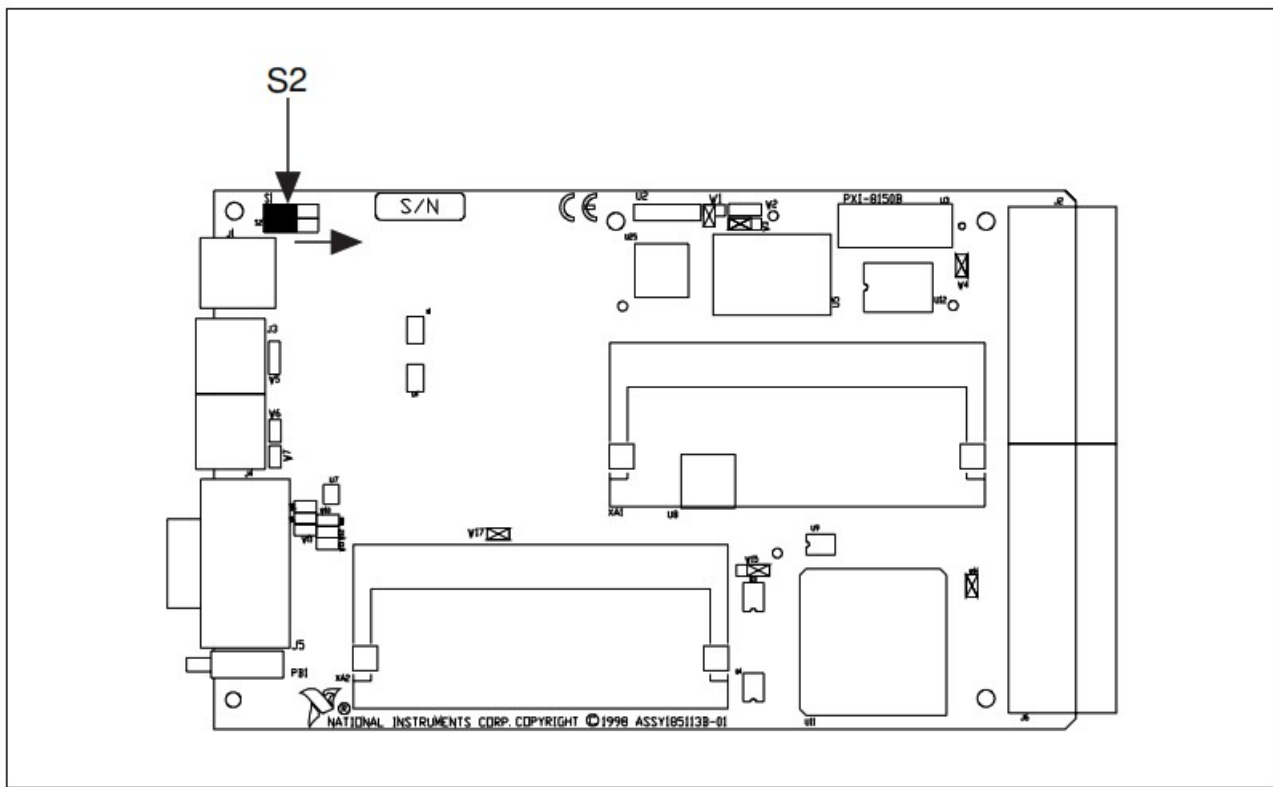
## Using the PXI-8150B in a PXI-1020 Chassis



**Note** Before getting started, you must have an external VGA monitor. If your PXI controller came with Windows NT, you must have access to a PC with Windows 98/95 installed to create a boot disk.

### Step 1. Switch Mouse Routing for Internal Connection

Slide switch S2 away from the controller front panel as shown below.



**Figure 1.** Switch Used for PXI-1020 Setup on a PXI-8150B Series CPU Board

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## **Step 2. Update the Controller BIOS to Route the Video Signals to the LCD Display**

This step involves four substeps: creating a boot disk, copying the BIOS update files to your newly created boot disk, setting the controller boot sequence to boot from the floppy drive, and setting the BIOS to enable the LCD signals.

### **Step 2a. Create a Boot Disk**

You can use any PC with Windows 98/95 installed, or use your PXI-8150B Series controller with Windows 98 installed to create the boot disk. If you want to use your PXI controller, insert it into Slot 1 of your chassis and connect it to an external monitor to create the boot disk. If your PXI controller has Windows NT, you cannot use it to create the Windows 98/95 boot disk; you must use another PC.

1. Power on your PC or PXI system. If this is the first time you boot your PXI controller, follow the instructions on the screen to register your operating system and to register any installed software options.
2. Double-click the My Computer icon on your Windows desktop.
3. Right-click the Floppy (A:) icon.
4. Select Format from the pop-up menu.
5. Select Copy system files only.
6. Insert a floppy disk into your floppy drive and click the Start button.

This creates your boot disk.

**Step 2b. Copy BIOS Update Files to Boot Disk**

Copy the PXI-8150B BIOS Update files from the floppy disk labeled PXI-8150B Update Files for Use With a PXI-1020/1025 Chassis, which is included with your controller, to the root directory of the boot disk.

**Step 2c. Set the Controller Boot Sequence to Boot from the Floppy Drive**

1. Insert your controller into Slot 1 of your PXI-1020 chassis and connect an external monitor to the VGA port.
2. Insert the boot disk into the floppy drive of your PXI controller.
3. Enter into the CMOS Setup Utility by turning on your PXI system and pressing the <Delete> key during boot-up.
4. From the main CMOS Setup Utility screen, select BIOS FEATURES SETUP using the arrow keys and then press the <Enter> key.
5. In the BIOS FEATURES SETUP screen, use the arrow keys to highlight the boot sequence entry and change it to A,C,SCSI by pressing the <Page Up> key.
6. Press the <Esc> key once to return to the main CMOS Setup Utility Screen and then press the <F10> key to save and exit. Reply to the prompt by typing Y to confirm saving the new CMOS settings.
7. Your controller will now boot from the floppy drive.

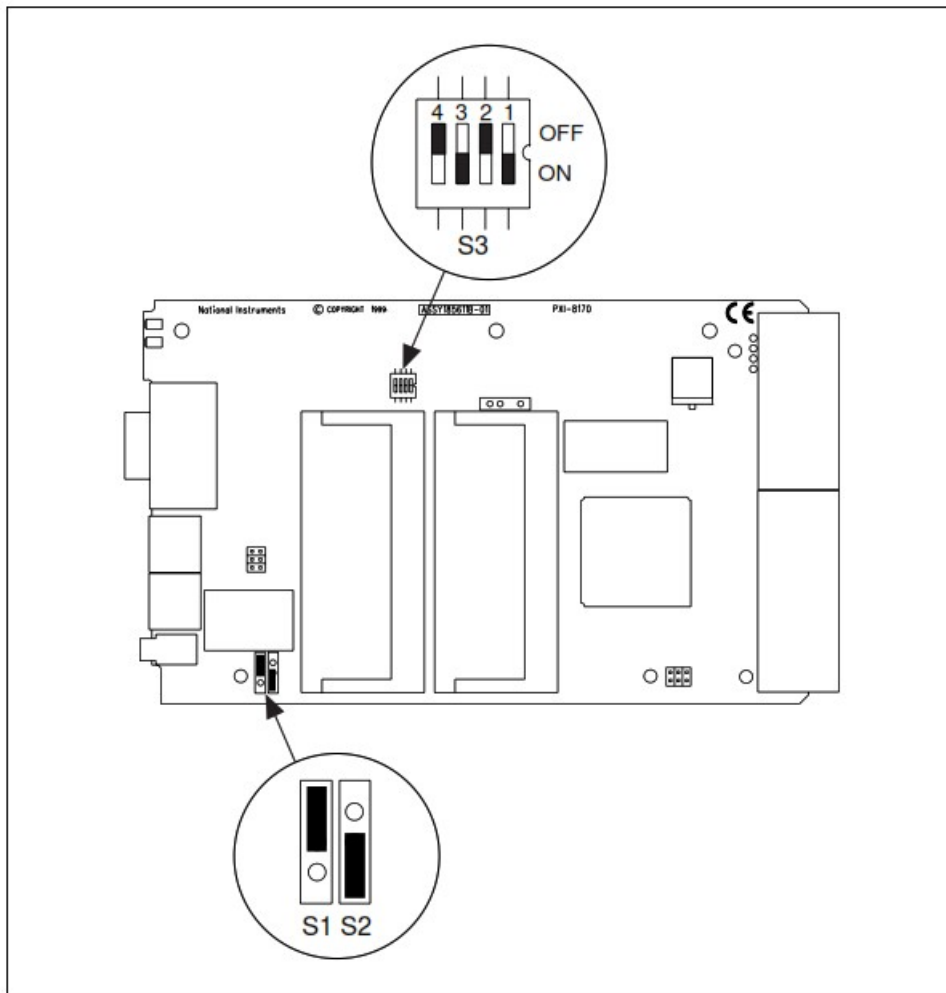
**Step 2d. Set the Controller BIOS to Enable the LCD Signals**

1. Follow the instructions on the screen to update the FLASH BIOS to enable the LCD function.
2. Power off the system.
3. Remove the floppy disk from the floppy drive.
4. Reboot the system with the external monitor still connected. If this is the first time you boot your PXI controller from the hard disk, follow the instructions on the screen to register your operating system and to register any installed software options.
5. Select Start»Control Panel»Display»Settings to change the number of colors while in 640 × 480 resolution.
6. Shut down Windows and power off your PXI-1020 chassis.
7. Remove the VGA cable from the PXI controller.
8. Reboot the system and verify that your LCD is working.

**Using the PXI-8170 Series in a PXI-1020 Chassis****Step 1. Set the LCD Display Resolution, Keyboard Routing, and Mouse Routing**

As shown in Figure 2, set the following switches:

1. Set switch S1 to set the keyboard for front panel connection.
2. Set switch S2 to set the mouse routing for internal connection.
3. Set switch S3 to set the LCD display resolution to 640 × 480.



**Figure 2.** Switch Settings for PXI-1020 Setup on a PXI-8170 Series CPU Board

## Step 2. BIOS Setup for LCD Support

1. Insert your controller into Slot 1 of your PXI-1020 chassis and connect an external monitor to the VGA port.
2. Enter into the CMOS Setup Utility by turning on your PXI system and pressing the <Delete> key during boot-up.
3. From the main CMOS Setup Utility screen, select Standard CMOS Setup using the arrow keys and then press the <Enter> key.
4. Select one of the following options from the LCD & CRT menu item:
  - CRT—Just prior to the OS loading, only the CRT Display will be enabled.
  - LCD—Just prior to the OS loading, only the LCD Display will be enabled.
  - Both—Both the CRT and LCD Displays are always enabled.
  - Auto—If a CRT is connected to the controller at boot, only the CRT is enabled. If a CRT is not connected at boot, only the LCD is enabled.



**Note** During the initial boot process, both the LCD and CRT displays are enabled.



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### Documents / Resources



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PXI-8170, PXI-8170 PXI Controller, PXI Controller, Controller

### References

-  [Test and Measurement Systems, a part of Emerson - NI](#)
-  [Test and Measurement Systems, a part of Emerson - NI](#)
-  [PXI-8170 National Instruments PXI Controller | Apex Waves](#)
- [User Manual](#)

